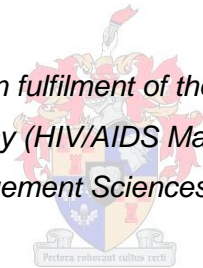


**ASSESSMENT OF KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) ON
HIV/AIDS AMONG PEER EDUCATORS AND STUDENTS AT THE TSHWANE
UNIVERSITY OF TECHNOLOGY**

by

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*Assignment presented in fulfilment of the requirements for the degree
of Master of Philosophy (HIV/AIDS Management) in the Faculty of
Economic and Management Sciences at Stellenbosch University*



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March 2013

Declaration

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: March 2013

ABSTRACT

Introduction: The aim of the study was to assess the knowledge, attitudes and practices of peer educators and university students, on whether the Peer Education-HIV/AIDS Prevention Programme has made an impact on the behavioural change of the recipients of the module as compared to the non-recipients.

Methods: A cross-sectional survey was conducted using stratified sampling design among peer educators and students to assess the knowledge, attitudes and practices of peer educators and students. Participants were selected from Tshwane University of Technology campuses in Pretoria, Soshanguve and Ga-rankuwa. The study was conducted among 300 participants; 150 peer educators and 150 students. Informed consent was provided with each structured questionnaire.

Findings and Discussion: Three quarters of the respondents in this study were females. This is consistent with many other studies of HIV/AIDS among students. The response rate in this study was 68% and was higher than the 45% of the Namibian Polytechnic students who participated in the KAP surveys of HIV/AIDS (De Beer et al., 2012).

Mean knowledge levels of HIV/AIDS in this study were slightly higher among peer educators (92%) than among students (90%). Peer educators had more positive attitudes towards HIV/AIDS than students in knowing someone who is HIV+ (78% vs. 67%) and sharing a desk with a PLHIV (97% vs. 95%). On whether HIV+ children should mix with others, attitude levels were the same (92% vs. 92%). Better practices were observed on peer educators vs. students - more peer educators (87%) than students (75%) said they always used a condom when they have sex.

Conclusion and Recommendations: Knowledge, attitudes and practices of HIV/AIDS are high among peer educators and students at Tshwane University of Technology and it is recommended that the Peer Education-HIV/AIDS Prevention Programme at TUT should continue giving attention to changing attitudes and practices among peer educators and other learners.

OPSOMMING

Inleiding: Die doel van die studie is om die kennis, houding en praktyke van Portuur Voorligters te assesser, oor die vraag of die eweknie-opvoedkundige MIV/VIGS Voorkoming program 'n impak het op die gedrags verandering van die ontvangers van die module in vergelyking met die nie-ontvangers

Metodes: 'n Deursnee-opname is uitgevoer deur gebruik te maak van gestratifiseerde steekproefneming ontwerp onder eweknie-opvoeders en studente om die kennis, houding en praktyke van eweknie-opvoeders en studente te assesser. Deelnemers is gekies uit die Tshwane Universiteit van Tegnologie kampusse in Pretoria, Soshanguve en Ga-Rankuwa. Die studie is gedoen onder 300 deelnemers, 150 portuuroopvoeders en 150 studente. Ingeligte toestemming is voorsien met elke gestruktureerde vraelys.

Bevindings en bespreking: Driekwart van die respondente in hierdie studie was vroulik. Dit is in ooreenstemming met baie ander studies van MIV/VIGS onder studente. Die reaksie in hierdie studie was 68% en hoër as die 45% van die Namibiese Polytechnic studente wat deelgeneem het aan die KAP opnames van MIV/VIGS (De Beer et al, 2012).

Middel kennis vlakke van MIV/VIGS in hierdie studie was effens hoër onder eweknie-opvoeders (92%) as onder studente (90%). Eweknie-opvoeders in hierdie studie het meer positiewe houdings teenoor MIV/VIGS as studente in die kennis van iemand wat MIV + is (78% vs. 67%), die deel van 'n lessenaar met 'n PLHIV (97% vs. 95%) en of HIV + kinders moet meng met ander (92% vs. 92%). Beter praktyke is waargeneem op portuuroopvoeders teenoor studente, meer portuuroopvoeders (87%) as studente (75%) het gesê hulle het altyd 'n kondoom gebruik wanneer jy seks het.

Gevolgtrekking en aanbevelings: Bewustheid, kennis, positiewe houdings en praktyke van MIV/VIGS is hoog onder eweknie-opvoeders en studente by die Tshwane Universiteit van Tegnologie en aanbevelings sal aangespreek word aan die einde van die studie.

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GLOSSARY OF ABBREVIATIONS

AIDS	Acquired Immune-Deficiency Syndrome
ARV's	Antiretrovirals
CCCU	Consistent Correct Condom Use
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
KAP	Knowledge, Attitude and Practice
PEHPP	Peer Education-HIV/AIDS Prevention Programme
PLWA	People Living With Aids
PSG	Pretoria, Soshanguve and Ga-Rankuwa campus
SAD	Sufficient Access and Duration
STI	Sexually Transmitted Infections
TB	Tuberculosis
TUT	Tshwane University of Technology
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
WHO	World Health Organisation

CHAPTER1: INTRODUCTION AND MOTIVATION

1.1. INTRODUCTION

By the end of 2012, 33.3 million people were living with HIV worldwide; 2.5 million people were newly infected with HIV; and 1.7 million deaths due to AIDS were reported (UNAIDS, 2012)

The global AIDS report of 2012 presents a promising and a colorful picture in terms of the declining HIV state in the sub-Saharan region showing that HIV epidemics in the region are stable or declining. In sub-Saharan Africa, the number of people newly infected with HIV fell from 2.2 million in 2001 to 1.5 million in 2011. In 22 countries of sub-Saharan Africa, the HIV incidence rate has declined by more than 32% between 2001 and 2011 (UNAIDS, 2012).

Karim & Karim (2010) point out that the available data suggests that the HIV epidemic in South Africa has stabilized. It is quite interesting, welcoming and encouraging to note that the life expectancy of South Africans has increased by six years since 2009. This is according to an expert panel's review of the state of South Africa's health published in the prestigious Lancet journal. Co-author Professor Salim Abdool Karim described the ten percent increase in life expectancy from 54 to 60 years in three years as "absolutely stunning". This is all because of the massive expansion of the country's HIV treatment programme (Cullinan, 2012).

More than 95% of all HIV infected people now live within the developing world. Africa alone is home to 70% of HIV infected people and 90% of all deaths due to HIV/AIDS; largely among adult, have occurred in the developing world. Singh et al., (2007), as cited by (Aggarwal et al., 2012).

Half of the population of South Africa (50 million people) is under 25 years and more than half of those newly infected with HIV each day are between 15 and 24 years old. These figures suggest that the way to halt the spread of HIV/AIDS is to focus on appropriate education of young people (HEAIDS, 2006 - 2009).

Young people are especially vulnerable to HIV, and it has been estimated that in many developing countries, half or more of all HIV infections occur among people younger than 25 years old (Qiaoqin et al., 2006), as cited by Mansoor et al., (2008). They further cite CDC (1995); that important groups range from high school seniors to university juniors, who are more likely to be prone to high-risk behaviour because of the transitional status of sexual activities as well as peer pressure, lack of maturity, and alcohol and drug use.

AIDS experts express concern about lack of attention to the domestic HIV/AIDS problem, noting that more counseling, testing, and education are needed to reduce the HIV infection rate (USA Today, 2004) as cited by Opt et al., (2004). They further point out that one group that has received recent attention from researchers and the media is university students. University students tend to engage in risky behaviour that could increase the spread of HIV. The CDC reported that from 2001 to 2004, the estimated number of HIV/AIDS cases for people aged 15-24 years increased but remained stable for people aged 25-29 years (CDC, 2004).

Given the fact that university students tend to engage in risky behaviour and are of an age in which infection rates and AIDS cases are still increasing, researchers have investigated university students' attitudes and beliefs about HIV/AIDS to identify variables that influence the effectiveness of HIV prevention messages aimed at this group, students' sexual practices, and their willingness to be tested (Mattson, 2002; Netting & Burnett, 2004; Van Den Eijnden et al., 1999) as cited by Opt et al., (2004) and they further note that the lack of HIV/AIDS research at university campuses results in limited knowledge about students' perceptions and safer sex behaviour and in cases the difficulty of developing effective education and prevention strategies (Mattson, 2002).

WHO (2004) estimates that youth aged 15 to 24 comprise 50% of all new HIV infections and consequently must be targeted for education in decreasing transmission and reducing the stigmatization of an HIV diagnosis. As this virus is most opportunistic, the only weapon that is available is to increase the skills level of university students through empowerment and acquisition of correct information/knowledge of HIV/AIDS through education.

At the current level of infection, every part and all institutions in the country face a big challenge of infection. However, the spread of the virus poses a bigger challenge to educational institutions and enterprises where the age structure of the population, the congregation of a large number of people in a small space and the mandate of such institutions have a direct link with the socio-economic development of any country. Therefore, HIV infection is an issue that every tertiary educational institution in the country must take seriously and have to implement HIV prevention programmes that will minimize the risks of the young generation with regards to HIV infection. There are three principal reasons for this:

- The vulnerability of a tertiary education institution to the many adverse impacts of HIV/AIDS;
- The need for a tertiary education institution to take the possible impact of infection into account in its planning, while at the same time taking steps aimed at prevention and control; and
- The responsibility of a tertiary institution – through knowledge dissemination, research and advisory services – to contribute; to stemming the spread of the disease and to mitigating its impact within the larger society of which it is a part. (Barnes, 2000).

Young people have always been and will continue to be part of the population that is most vulnerable to HIV/AIDS because they often begin their sexual behaviour before they have the knowledge and skills to protect themselves or because they are exploited by others. However, they are also capable of making responsible decisions to protect themselves when given the necessary information, skills and support and are educated and motivated to make safe choices, (National Intelligence Council, 2002).

It was also argued in support of the previous statement (Understanding HIV/AIDS, undated) that several factors make the youth particularly vulnerable to HIV/AIDS. The youth face health risks every day. Experimentation and risk-taking help the youth grow and mature, but can also lead to behavior that threatens their current or long-term health. Age, biological and emotional development, and peer pressure are often factors leading to risky behaviour. Can sexual behaviour be changed? HIV prevention interventions can reduce sexual risk behaviour. This has been well established by

numerous methodologically sound evaluations of risk reduction interventions (Karim & Karim, 2010).

The powerful influence of peers on adolescent behaviour has been acknowledged for many years. A setting where peer education is thought to be particularly appropriate is the university or college campus, where most of the population is “chronically well” and the majority of health problems relate to issues of lifestyle, (Gould and Lomax, 1993) as cited by (Sawyer, Pinciario & Bedwell, 1997). They further state that peer education programs are an effective way of educating larger numbers of students at limited cost to the institution. Although college peer education has become an extremely popular programming method, there is a dearth of the outcome evaluation necessary to justify such a proliferation (Fennel, 1993). Perry et al., (1986) reported a positive effect on academic and attitudinal growth for the student participants and the peer educators themselves. Sloane & Zimmer (1993) found a significant relationship between a peer AIDS education initiative and the practice of safer sex.

University students are at a greater risk for HIV/AIDS because of unsafe sexual practice, (Zhou et al., 2011). Hence young people’s involvement in promoting HIV/AIDS prevention becomes critical, based on the challenges of this epidemic; it is further argued by (Barnes, 2007) that several factors make the youth particularly vulnerable to HIV infection, as they face health and challenging risks every day. It is against this background that the researcher calls for an evaluation of the Tshwane University of Technology (TUT) Peer Education-HIV/AIDS Prevention Programme module, whether this module does have an impact on the following issues that were surveyed in Table 2.

Terry et al., (2006) said that planning and implementing effective HIV prevention programmes in Southern Africa require ongoing assessments of knowledge, attitudes and practices (KAP) that are sensitive to African culture and gender roles. This was further elaborated by Opt and Loffredo (2004), that KAP study measures the knowledge, attitudes and practices of the community and it serves as an educational diagnosis of the community. In line with the mentioned sentiments, the main purpose of this study is to assess the knowledge, attitudes and practices of peer educators relative to their counterparts; being students.

One could also argue that due to the challenging social fabric of our society, the challenge facing us; in trying to combat the pandemic is to be innovative, creative and pro-active in coming up with HIV intervention programmes that are tailored to meet and suit the current lifestyle, especially addressing the young people who are diverse in nature.

1.2. TUT'S HIV/AIDS RESPONSE

Tshwane University of Technology (TUT)'s HIV and AIDS peer education programme aim to primarily develop and implement the institutional response to HIV/AIDS by not only preparing for and mitigating the impact of the disease on the institution but also by contributing to the country's response to the disease, within the framework of the HEAIDS programme.

The core functions of the institution namely learning, teaching, research and community service are seen as assets in facilitating HIV/AIDS response. In line with the institutions commitment to 'care'; primary attention be given to those infected and affected by the disease with the view to creating a culture of non-discrimination and acceptance (TUT HIV/AIDS Policy, 2005).

1.3. PROBLEM STATEMENT

HIV and AIDS are particularly devastating to sectors of society which are already marginalized, powerless and vulnerable. According to Rosenthal and Khalil (2010), those most affected are those who have little control over their lives. Young people are most vulnerable to infection and the least able to deal with consequences. It is necessary for the people to be involved in finding their own solutions. Thus this study focused on young people's knowledge, attitudes and practices to address HIV and AIDS.

1.4. AIMS OF THE STUDY

The aim of the study was to explore the knowledge, attitudes and practices (KAP) of peer educators and students regarding HIV/AIDS at Tshwane University of Technology.

1.5. OBJECTIVES OF THE STUDY

The objectives of this study were to:

- Assess the level of **knowledge** of HIV/AIDS among peer educators and students at TUT.
- Assess the **attitudes** towards HIV and people living with AIDS among peer educators and students at TUT.
- Assess the **practices** on HIV/AIDS among peer educators and students at TUT.
- Identify knowledge/education gaps between peer educators and students at TUT.
- Recommend where necessary based on the outcomes of the study.

1.6. MOTIVATION FOR THE STUDY

This study was conducted among students at Tshwane University of Technology in the Gauteng province of South Africa. It was prudent to conduct this study among university students in order to ascertain their knowledge, attitudes and practices (KAP) regarding HIV/AIDS, as cases of STI's, HIV infections and high rate of pregnancies were reported at the campus wellness centre. University students in general are the most educated of the youth and their KAP on health can be an indicator of the magnitude of the problem among youths in South Africa. This study will add to the knowledge base on this topic at universities of technology.

HIV/AIDS affects an institution through its impact on the individuals who comprise it – students, academic staff, support staff and ancillary staff. Barnes (2007) cites that the presence of HIV in a country makes it imperative that a tertiary education institution examines its policies to determine whether any operation may increase or decrease the vulnerability of individuals and reduce the risk of HIV infection. HIV/AIDS is thus a pandemic whose impact on societies is without precedent in recorded human history. The KAP study conducted on the students will assist the institution in terms of identifying the knowledge gaps, and paint a picture of the current situation and pronounce on new areas that would have come out of the study.

1.7. RESEARCH QUESTION

What is the difference in knowledge, attitudes and practices (KAP) related to HIV/AIDS among peer educators as compared to students at the Tshwane University of Technology?

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

The international literature on AIDS and education is growing rapidly as the HIV/AIDS epidemic presents a big challenge to tertiary education institutions worldwide (Kelly, 2001).

In the early years of the epidemic, preventing HIV was seen as an issue of changing individual behaviour, or changing the behaviour of individuals in specific high-risk groups. Educational campaigns were directed at individuals, who were informed what behaviour would put them at risk for HIV. But the focus neglected the social contexts within which particular actions become meaningful and interventions often failed to elicit behaviour change. Social scientists therefore began to investigate individual behaviour as guided by a shared culture. It became more and more apparent that an understanding of the social, political and economic context within which AIDS occurs is critically important. (UNAIDS, 2001).

The HIV/AIDS pandemic has moved beyond public health crisis, to a personal, community and national development catastrophe. Because the pandemic acts at all levels, efforts to contain it must also act at individual, community and national levels (Osborne et al., 1997). Therefore; there is no segment of society that can claim to have escaped its effects (Karim & Karim, 2010). Lal et al., (2000) further argue that the spread of HIV in any community is; in part determined by the knowledge of and attitudes towards sexuality of its members, and by their actual sexual practices. Before formulating public health policies for the prevention of HIV, it is critical to obtain information about the prevalent knowledge, attitude and practice (KAP) regarding HIV/AIDS, STD's and sexuality in the target community.

Studies have sought to examine and gain some understanding of what knowledge, attitudes and practices of those participating in the educational endeavour (teachers, youth and adolescents) carry. Often these studies have as their main outcome recommendations towards the development of 'effective' prevention strategies for those perceived as 'most vulnerable' [in many instances adolescents and youth aged 14-24]

(Agha and Van Rossem, 2004) as this adolescent group accounts around 60% of new infections in many parts of the world (World Bank, 2002).

Critically analyzing the points that have been put forward, the answer lies in the power of education, and communication to all levels of the society, information sharing, research and development. This is the route that needs to be taken to win the battle against the pandemic. This is further supported by the (UNESCO, 2001) strategy for HIV and AIDS preventative education, which states that the cost of not initiating the huge efforts in preventive education – can be counted in millions of lives lost, in the destitution of communities and in reversals that will last throughout the whole century.

2.2. KNOWLEDGE, ATTITUDES AND PRACTICES OF HIV/AIDS AMONG UNIVERSITIES

A study conducted by Aggarwal et al., (2012) amongst 300 dental and nursing students at MM College of Dental Sciences and Research in India compared the knowledge, attitudes and behaviour of dental and nursing students towards HIV/AIDS. This revealed that all the students had heard about HIV/AIDS, thirty percent (30%) of dental students and forty percent (40%) of nursing students thought that treatment was available for AIDS, while ten percent (10%) of dental students thought a cure was present for AIDS. Both dental and nursing students had very good attitudes regarding the known people living with HIV/AIDS.

A cross-sectional study was conducted among 393 students at the University of Botswana to evaluate their HIV-related knowledge, attitudes, and practices. The mean percentage of knowledge questions answered correctly was 96%. While 98% agreed that all sexually active adults should know their status and that condom use is important, only 56% believed getting tested was common and 66% believed that it was common for students to always use a condom. The study concluded that students had excellent knowledge yet their perceived use of testing services and condoms remain lower than might be predicted based on knowledge scores (Stephens et al., 2012).

De Beer et al., (2012) assessed HIV/AIDS knowledge and attitudes, HIV prevalence and access to healthcare among students at the Polytechnic of Namibia and the University of Namibia. Half of the university students and 45% of the Polytechnic students participated

in the knowledge and attitudes surveys. HIV/AIDS knowledge was reasonable, except for misperceptions about transmission. Awareness of one's own HIV status and risks was low. The authors concluded that meaningful strategies addressing the gap between knowledge, attitude and young people's perception of risk of HIV acquisition should be implemented.

A descriptive cross-sectional study was conducted among 600 students studying at health institutes in Sana'a city, Yemen, to assess their knowledge, attitudes and beliefs towards HIV/AIDS. Students had a moderate level of HIV/AIDS knowledge (an average of 67.6% were correct on all items). Nevertheless, 82.3% knew that HIV could be transmitted by sexual intercourse without a condom, 87.5% from syringes, 71.8% from infected blood and 80.7% from mother to child. Misconceptions about how HIV is transmitted (e.g. hugging and kissing or sharing food, swimming pools and classrooms) were found among 41.5% of the students. Attitudes towards people living with HIV/AIDS showed that 59.8% of students were accepting and positive. There was a common opinion among respondents that HIV-infected persons needed to be punished (65.5%) and isolated (41.0%); however, 86.8% were willing to care for an HIV-infected person (Al-Rabeei, Dallak and Al-Awadi, 2012).

A study by Fraim (2012) examined the knowledge levels and misconceptions of HIV/AIDS among university students (n=1925) in Istanbul, Turkey. Almost the entire sample reported hearing about HIV/AIDS. However, the sample had average to moderate levels of knowledge regarding HIV/AIDS. Findings indicate that less than 20% of the sample had misconceptions about HIV/AIDS where 16% believed AIDS was a punishment from God. Sex differences were examined for knowledge levels and misconceptions. Chi-square analyses suggest significant sex differences for HIV/AIDS knowledge levels and misconceptions. Throughout the literature, lack of education and misinformation has been linked with having low knowledge levels, negative attitudes, and existing misconceptions regarding HIV/AIDS.

Ni and Htet (2012) conducted a cross-sectional study to assess the knowledge and attitude of HIV/AIDS infection among 155 medical students at the University of Malaysia Sabah, a public medical school in Malaysia. Majority of students gave correct responses for mode of transmission while only 60.6% had knowledge that HIV can be transmitted

via kissing an infected person when an oral ulcer is present. Regarding knowledge on high risk population for HIV infection, only 17.4% agreed for youth, 94.2% had knowledge that HIV infection can be prevented by condom usage but only 44.5% responded correctly regarding the effectiveness of the condom. Majority of the respondents (83.2%) disagreed on showing no sympathy towards HIV positive persons. Regarding various sexual behaviours, 43.2% and 35.5% approved of masturbation and oral sex respectively while 78.7% and 86.5% disagreed with anal sex and sex with changing partner respectively. 56.8% agree for condom usage with every sexual encounter and 98.7% agreed for the need of sex education sessions. Based on the findings of this study, knowledge regarding mother to child transmission and condom usage must be more emphasized in the medical curriculum so that future doctors could play a leading role in better prevention of HIV/AIDS infection in the community.

A cross-sectional study was conducted on knowledge, attitudes and practices regarding HIV/AIDS among 315 tertiary education students in Lagos, Nigeria. Although the mean score of the participants' responses to ten HIV/AIDS knowledge questions was 8.3 of 10 points, 73.5% of them did not perceive themselves at risk of being infected. Majority (53.8%) had not changed their dating behaviour as a result of concerns for HIV/AIDS and 70.3% had multiple lifetime sexual partners. Those who perceived themselves at risk of infection were significantly ($P = 0.019$) more likely to always use condoms. The study concluded that awareness and knowledge of HIV/AIDS is high among tertiary education students in Lagos, Nigeria. However, risk perception is low with high-risk sexual behavior. The failure to perceive HIV/AIDS as a personal risk has prevented commitment to behavior change. Interventions aimed at influencing risk perception are paramount to curb the spread of this dreaded disease (Durojaiye, 2011).

Another cross sectional study on knowledge, attitude and practice factors associated with condom use was conducted among undergraduate students at Jomo Kenyatta University of Agriculture and Technology in Kenya. The study found that among 461 participants, 66.2% had experienced sexual intercourse. The overall level of condom use was high 72.8% (222). There was a significant relationship between condom use and general attitude ($P < 0.001$). However, there was no significant relationship between condom use and knowledge on specific issues of HIV and practices. Continuous health

education campaigns on sexuality, proper usage and advantages of condoms should be enhanced (Nesidai, Ng'ang'a, Mwangi and Wanzala, 2011).

An exploratory and descriptive study was conducted among 324 undergraduate students at three tertiary institutions in Rivers State (University of Port Harcourt, Rivers State University of Science and Technology and Bori Polytechnic) to evaluate knowledge and beliefs about HIV/AIDS among male and female students of Nigerian universities. An average of 89% of the respondents from the three institutions was aware of HIV being transmitted through sexual intercourse with an infected person. 81% believed that HIV transmission could be possible through sharing unsterilized equipments, 89% believed that HIV infection was possible through injection or transfusion of contaminated blood. An alarming fact was also noted that up to 31% believe that they can get HIV through physical contact such as kissing, hugging and giving a handshake to a HIV infected person. While 6% of the respondents did not believe in HIV/AIDS and were unaware about how it could be transmitted. Despite the knowledge and awareness of HIV/AIDS and the consequences of engaging in risky behaviour, the environment of poverty (28.6%) and economic issues (29%) are some of the major factors which would make it difficult for a change in habituation of the youth (Ebeniro, 2010).

A cross-sectional survey was conducted among students enrolled at two universities in China, the Xinjiang University (XU) and Xinjiang Medical University (XMU) to assess the level of knowledge on HIV/AIDS and its risk factors and attitudes towards HIV/AIDS and its transmission, and to identify high risk behavior associated with HIV/AIDS among university students. Among the 400 students who participated in the study, the mean knowledge score was 19.3 ± 5.5 and their knowledge score ranged from 2 to 30. Two hundred and ninety eight (74.5%) students had knowledge score above 15. Mean knowledge scores were significantly higher among males ($p=0.04$), those who majored in medical courses ($p=0.01$), those in the final year of study in university ($p=0.04$) and by ethnicity, among Han Chinese ($p=0.00$). However only 33.3% of the students; had positive attitude towards HIV/AIDS and patients living with AIDS. Mean attitude scores were not significantly different by sex, study major, year of study or ethnicity. With regards to high risk behaviour associated with HIV transmission, 15.8% of these

students had at least one risk behaviour related to unprotected sexual exposure. High-risk behaviour was significantly higher among males ($p=0.03$) and first year students ($p=0.03$). The study concluded that most Xinjiang university students had good knowledge, but negative attitude towards HIV/AIDS and HIV/AIDS patients, and 15% of them reported having at least one high-risk behaviour related to sex and unprotected sex. Thus HIV/AIDS health education efforts should be intensified to change attitude and practice among university students in Xinjiang especially among female students, newly enrolled students, and among the Uyghur and other minority students (Maimaiti et al., 2010).

About 650 students enrolled at a Midwestern university in the United States were surveyed between February and April 2008 about their HIV knowledge, sources of information, attitude toward people living with HIV/AIDS, and their sexual behaviours. Although the majority of students (77.3%) reported to be very familiar with HIV/AIDS including its mode of transmission, important misconceptions still existed regarding HIV/AIDS. Several students either thought that mosquitoes transmit HIV/AIDS (14.2%) or did not know one way or the other (19.9%). About 43.1% were unsure about the existence of drugs that can prevent maternal to child transmission of HIV and 12% actually believed that these drugs do not exist. Moreover, despite the high prevalence of risky sexual behaviours among students, the majority of participants (86.8%) did not perceive themselves to be at risk of contracting HIV. As a result only 29.4% had ever been tested for HIV. The study concluded that coexistence among college students of both misconceptions about the mode of HIV/AIDS transmission and denial about their vulnerability to contract this disease underscores the need for a proactive approach to address these challenges facing our youth (Inungu et al., 2009).

A cross-sectional study that was aimed to describe the level of knowledge, perceptions, attitudes and practices related to HIV among 1,054 first year students in four Afghanistan Universities. This study revealed that the overall awareness among students was high, however approximately 10% of the students were not aware of HIV and had no knowledge at all. And the overall knowledge about HIV among first year students was found to be at a poor level, this was due to the lack of educational programs about HIV in schools and universities in Afghanistan. Furthermore the perception/attitudes levels among the respondents were found to be moderate; this could be explained by the

uncertainty of the respondents due to insufficient knowledge about HIV. The study also found a considerable proportion of respondents (29.6%) with at least one risk practise. High risk behaviours were significant more common in male respondents compared with females; (32% vs. 21.3%; $p=0.0001$) (Mansoor et al., 2008).

A descriptive cross-sectional survey was conducted by Odu et al., (2008) on 368 students to determine the knowledge, attitude and sexual behaviour of students in a tertiary institution in Ede, Osun State in south western Nigeria with regard to HIV/AIDS. . The study found that most (89.4%) respondents were aware of the existence of HIV/AIDS, and knew the aetiology, routes of transmission, signs and symptoms, and preventative measures against the disease. A little over half (59.8%) of the respondents revealed that they could hug people with HIV/AIDS. One out of four (27.2%) stated that these persons should be isolated from the community. Less than a quarter (22.3%) of the respondents believed that they were vulnerable to HIV/AIDS. More than half (58.2%) had ever had sex; the mean age at their first sexual exposure (for all respondents) was 16.7-+44 years. Almost half (48.2%) of the 191 currently sexually active respondents had multiple sexual partners. Of the sexually active respondents, 75% claimed to have ever used condoms; among these, male respondents were more likely to have ever used condoms than their female counterparts. The study revealed a gap in the knowledge of HIV/AIDS and an inappropriate sexual behaviour among respondents. Meaningful strategies, such as an innovative and culturally sensitive adolescent sexual and reproductive health programme that focuses on modification of sexual behaviour should be adopted to allow young people to prevent transmission of HIV.

A study by Davis et al., (2007) on 156 African American college students' from three public universities revealed that the sexually active participants reported less knowledge about HIV/AIDS transmission and more prejudiced attitudes toward individuals living with HIV/AIDS than the abstaining students. HIV/AIDS awareness was inversely associated with intentions for future casual sex encounters and was positively correlated with intentions to use condoms in the event of a one night stand. This study proposed intervention based research to increase safer sex practices and increase condom self efficacy.

A cross-sectional survey of 259 Chinese undergraduate students asked them to provide information about knowledge and attitudes about HIV/AIDS. Study results indicated that the majority of undergraduates had a moderate level of HIV and AIDS knowledge at 80%, acceptance and attitudes towards people with HIV and AIDS at 59.8%. Boys had more acceptance and positive attitudes towards people with HIV and AIDS than girls. Students majoring in medicine, performed better (more knowledgeable and accepting) than non-medical students. Differences between students with various monthly expenditures were found, 6.2% of students had 3-5 sexual partners which has rarely been found in Chinese students; most students did not know HIV VCT centres and most students did not show their confidence for controlling of HIV and AIDS in China. In conclusion, students' knowledge about HIV/AIDS was uneven. A peer educational program to talk about self esteem, healthy sexual attitudes, being human-accepting and loving should be developed in the near future. (Xiaodong et al., 2007).

A KAP survey of HIV/AIDS among 308 college students in Shenyang, China found that the average score was 24.83 ± 4.09 (total score was 33) for AIDS knowledge. The average score of attitude toward AIDS and the AIDS patients was 5.41 ± 1.13 (total score was 7). The medical students had higher scores (25.98 ± 3.44) than non-medical students (24.48 ± 4.21 , $P=0.01$). The source of AIDS knowledge was TV (76.3%) books (56.4%) special propaganda (46.9%) broadcast (46.2%) teaching in class (25.1%) introduced by schoolmate (22.5%) other (10.7%). The reported rate of student who had girl/boy friend was 31.5%, and the rate of students who had sexual relations was 6.2%. It concluded that the students' knowledge of AIDS was lacking in Shenyang and that the more knowledge of AIDS the students had, the more active attitude to the AIDS patients (Zhe et al., 2006).

A survey by Norman, Carr & Jimenez, (2006) of 1,252 Jamaican university students examined the attitude of the students towards people living with HIV. The study revealed that less than half of the students reported sympathetic attitudes towards homosexual men or women sex workers living with HIV while a majority reported generally sympathetic attitudes towards heterosexual men and non-sex worker women living with the disease. Male students were significantly less likely to report sympathy for homosexual men than for any other group. Spirituality was associated

with sympathy for homosexual men and women sex workers, but not for the remaining two groups. The study suggested targeted interventions at the individual and societal level.

In a study conducted by (Ibe, 2005) in Nigeria examined the knowledge, attitude and preventative practices (KAP) on first year students at University of Port-Harcourt, regarding the HIV/AIDS. A challenging picture was painted, where students had a partial knowledge of HIV/AIDS, the mode of transmission, prevention and care. Thus the importance of education intervention plays a key role, as one can argue that it would have provided the students with sufficient knowledge and enable them to make informed decisions regarding their HIV/AIDS issues and behaviours.

A study to explore regional, gender and grade differences in AIDS knowledge was conducted on 1081 students from eight colleges in China. The data indicate an inconsistent level of AIDS knowledge among students, with a significant gender and grade difference. More than one-third of the students perceived themselves as having limited knowledge of AIDS. While the students could identify transmission modes, they were less knowledgeable about symptoms, activities that did not transmit the virus, treatment and preventive measures. The majority of the students reported having discussed AIDS issues with their peers and friends, but few of them had done so with their parents or teachers. AIDS knowledge varied among students by site of residence, with the highest knowledge among students from the urban areas and the lowest among those from rural areas. The data underscore the urgent need for HIV/AIDS-related health promotion and prevention efforts targeting college students as well as younger age groups in China (Li et al., 2004).

A study by Jin, Honghong and Williams (2003) to determine the relationship between knowledge and attitudes related to HIV/AIDS among university students in Changsha, China found that students' knowledge score was 12.63 ± 2.97 (0~20), it indicates that the subjects did not have optimistic knowledge about HIV/AIDS. The mean of students' attitude about HIV/AIDS was 1.08 ± 2.97 (-5~+5), 22.2% of the students show an attitude of intolerance and non-therapeutic about the disease. Significant correlations were found between knowledge and attitude about HIV/AIDS ($r=0.138$, $P=0.001$), attitudes and grade ($r=-0.081$, $P=0.01$). (3) Gender differences were found in knowledge ($t=3.19$, $P=0.01$) and

attitudes about HIV/AIDS ($t=2.21$, $P<0.05$). Based on the findings of this study, the authors recommended it is necessary to make an effort to conduct HIV/AIDS preventive education program among university students and that increasing the students' knowledge about HIV/AIDS will improve the students' positive attitudes about HIV/AIDS patients.

A survey of 500 Turkish university students' knowledge, attitudes, sexual behaviours and perceptions of risk related to HIV/AIDS (Cok, Gray & Ersever, 2001) revealed a moderate level of knowledge about the transmission, symptomology and prevention of HIV. The students had significant misconceptions regarding HIV/AIDS. Students' attitudes toward people with HIV/AIDS were contradictory showing both accepting and unaccepting views depending, in part, on their personal involvement with an HIV positive person. One third of the total participants who reported sexual activity also described limited safer sexual behaviours. The perceptions of students of their personal risk of contracting HIV were low regardless of their sexual activity. The study recommended HIV/AIDS education for Turkish university students.

Melkote and Goswami (2000) conducted a study of 203 Hyderabad university students (India) to predict their attitude towards people living with HIV/AIDS. This study provided with statistically useful multiple regression model where higher scores on knowledge of AIDS transmission through external contact indicated more positive attitude towards AIDS and safe sex, and higher parental income respectively had a direct (positive) influence on attitude towards people living with HIV/AIDS. This study indicated the importance of health communication/ education campaigns in bringing about a positive change of opinion towards people living with HIV/AIDS by influencing the attitude and knowledge of AIDS variables.

Gray, Devadas, Vijayalakshmi & Kamalanathan (1999) examined the knowledge, attitudes, beliefs of Hindu students from a government women's college of South India, towards people with AIDS. The sample consisted of four hundred female students at a government funded Women's University in Southern India who participated in an AIDS survey research project. Results indicated that a majority of the participants learned about HIV/AIDS from reading material while some learned

about HIV/AIDS from school classes, and only a few learned from family members. Thirty-nine percent had never communicated to anyone about HIV/AIDS. The results indicated that the majority of Indian women in this study did not know about explicit sexual behaviour which transmitted the virus. The study suggested the need to increase educational efforts at the university to address the multiple psychosocial issues related to HIV/AIDS.

Kirby et al., (1997) conducted a randomized controlled trial among 1657 youth in the USA. The trial had two arms: (1) Peer-led interactive HIV/AIDS and pregnancy-prevention curriculum emphasizing skills-building plus existing middle school sexual health curriculum (intervention). (2) Existing middle school sexual health curriculum (control).

The intervention curriculum significantly increased HIV/AIDS-related and reproductive health related knowledge in the intervention classrooms versus control classrooms. However, the intervention significantly improved only 2 out of 21 sexual attitudes and beliefs related to HIV prevention and pregnancy and did not significantly change sexual or contraceptive behaviours.

Stiernborg et al. (1996) argues the fact that experiential learning or didactic teaching in a short HIV/AIDS training leads to a significantly increased HIV/AIDS knowledge levels and attitude effects as he hypothesized, in his studies with nursing students. In his findings both the experiential learning and didactic approach caused a significant increase in nursing students' HIV/AIDS knowledge levels. However the experiential learning yielded higher knowledge levels compared to the didactic approach, and improved the attitudes by 7% on experimental approach and about 4% on the didactic approach.

Owens (1995) measured the knowledge and attitudes of 48 African-American social work students and found that many of the students had some knowledge about cause and prevention but lacked information about prognosis and transmission. Many students felt unprepared to handle AIDS practice situations, and felt apprehensive about contact with people living with AIDS. The study suggested the need to take

steps to ensure that African American social work students are prepared to intervene effectively in the AIDS epidemic.

2.3. KNOWLEDGE, ATTITUDES AND PRACTICES OF HIV/AIDS AMONG PEER EDUCATORS

Othero, Aduma, Opil (2009) conducted a study to determine the current HIV/AIDS knowledge, attitudes and sexual practices (KASP) indicators among 500 university students that would facilitate development and implementation of a peer education programme. The study found high levels of HIV and AIDS awareness, knowledge and attitudes and the current related behavioural trends and tendencies, among the students at the University. 68.5% of students reported having ever had sexual intercourse, with males being the majority at 78.2%, while the females were 54.7%. A large majority (77%) of females were in current sexual relationships compared to 66.7% of males. A significant proportion (54.8%) of first year students reported having had their first sexual intercourse at the university.

Sexual activity was seen to increase from 56.9 to 71.2% among the first year students when they got to second year of study at the university. Peer pressure emerged as an important factor in students' sexual behaviour ($P=0.001$). Of the students, 32% reported having undergone HIV tests, 70.8% were willing to go for a test while 74.3% perceived they had a chance of being infected with the virus based on their previous risky sexual experiences. A significant 77.7% of the respondents affirmed having ever used condoms but only 15.8% reported consistent condom use. They concluded that High proportions of students are sexually active with peaks in first and second years of study. This is coupled with an equal inconsistent use of condoms. Peer influence emerged as an important feature in accelerating risky sexual behaviour hence the need for advancing peer education programmes in universities.

A survey was conducted by Shipalana (2009) on knowledge, attitudes and practices on HIV/AIDS among peer educators in Limpopo. The findings revealed an average knowledge of peer educators on HIV/AIDS, positive attitudes and safe sexual practice by using condoms. She recommended an in service training for peer educators and a

strong need of support from supervisors and management in the implementation of peer educator's programme.

Kamaldien (2009) conducted a study on knowledge, attitudes and practices on HIV/AIDS among employees of Eskom. He found high level of HIV/AIDS knowledge amongst the respondents and concluded that it was as a result of attending HIV/AIDS workplace awareness programmes. He also concluded that knowledge enabled employees to make informed decisions about their own sexual behaviour and that peer educators were confident that their knowledge levels were sufficient to educate their peers.

Campus-wide baseline and end-line surveys were conducted to assess an HIV peer education intervention on 632 and 746 students at the Kenyatta University in Nairobi, Kenya. After 2 years of on-campus intervention, no changes in behavior were evident with respect to either abstinence or number of sexual partners. Small but statistically significant changes were found in condom attitudes and behavior, and a large increase in HIV testing was evident. It is recommended that future research more specifically compare abstinence versus multiple option peer education programs, giving special attention to the role of peer educators as models (Miller et al., 2008).

A cross-sectional study of 900 retail-section employees measured HIV/AIDS knowledge, attitudes towards people living with HIV/AIDS, belief about self-risk of infection, and condom use as a practice indicator. The impact of an HIV/AIDS peer-education programme on these outcomes was examined. The study found that training by peer educators had no significant impact on any outcome. Fifty-nine per cent of subjects had a good knowledge score, 62% had a positive attitude towards people with HIV/AIDS, 34% used condoms frequently, and the majority of participants (73%) believed they were at low risk of infection. The authors concluded that the HIV peer-education programme was found to be ineffective and may have involved an opportunity cost. The programme contrasts with more costly comprehensive care that includes antiretroviral. The private sector appears to have been as tardy as the public sector in addressing the epidemic effectively (Sloan and Myers, 2005).

Kent et al., (2005) in their study at the University of Cape Town, developed an introductory peer led workshop on HIV/AIDS for first year students covering a range of

biomedical and social issues. To evaluate the workshops, volunteer students were randomly allocated to participate in one of the workshops. Students who participated in the workshops showed positive changes in their attitudes and skills regarding HIV, as compared to those who didn't participate.

2.4 . EVIDENCE OF YOUTH PEER EDUCATION SUCCESS

Peer education is a health and behaviour change communication intervention which has been used to access “hard to reach” groups with the participation of those who are of similar age, background or interest. The objective of such approaches in the school setting is to assist young people to develop the knowledge, attitudes and the skills that are necessary for positive behaviour change (Truong, 2008) as cited by Mason-Jones et al., (2011). The aim of many peer education programmes is to help the youth make informed decisions while providing them with support and accurate information. While rigorous evaluations are rare, peer education has proven to be effective in a number of different settings, including sexual health. (Maticka-Tyndale, 2006), (Svenson et al., 2007) and (Kinzey, 1999) as cited by (Sriringanathan et al., 2010).

In general, peer education can constitute anything from something as simple as informal conversations with young people at a club about risky health behaviour, to formal referrals to service providers. Other methods include benefit concerts, school assemblies, workshops, posters, message boards, newsletters, stickers, buttons, theatre, art, song contests, essay contest and distribution of articles and pamphlets (Gange et al., 2003) as cited by (Sriringanathan et al., 2010). The range of methods through which peer educators try to reach their audience is extensive and constantly expanding. One of the benefits that need to be cited is that peer education programmes are also beneficial to peer educators themselves (Ford, Inman, 1992) as cited by (Sriringanathan et al., 2010) and they further argue that peer educators are usually given special training which contributes to personal development and job skills.

In a study conducted by Visser (2007) on HIV/AIDS prevention through peer education and support in secondary schools in South Africa, she used a quasi-experimental design to evaluate the impact of the programme on psychological well-being, personal control, school climate and reported high-risk behaviour of learners aged between 13 and 20

years. The results showed that the percentage of learners in the experimental group who were sexually experienced remained unchanged over the time period of 18 months. In contrast, a significantly increased percentage of learners in the control group were sexually experienced after the same time period. The control group also perceived more of their friends to be sexually experienced. No differences were reported in condom use in either of the groups. The findings of this study suggest that peer education can contribute to a delayed onset of sexual activity, and can therefore contribute to the prevention of HIV/AIDS amongst adolescents. Therefore a peer education program had been shown to be effective in improving students' knowledge and attitudes towards HIV/AIDS (Shen et al., 2008; Huang et al., 2008), as cited by (Zhou et al., 2011).

As part of a consultancy with the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS), Maticka-Tyndale (2006) surveyed the literature on community-based peer education programs that targeted youth in lower income countries. She assessed the evidence of program impact and presented highlights of that research. The review found that fifteen of the seventeen interventions that addressed knowledge demonstrated significant improvements, while four interventions also demonstrated no significant change for some subgroups of the targeted population. One study had no appreciable effect on knowledge. Sexual activity: Interventions produced mixed results for changes in sexual activity. Of those that targeted an increase in abstinence through delay of first sexual intercourse, three produced positive results, one of those also produced negative results, and one produced no significant changes.

Of the seven that targeted a "return to abstinence" through celibacy in a recent time period (e.g., three months, six months), four produced positive results, one had both positive and non-significant results for different segments of the population, two had non-significant results, and one had negative results. The one area of sexual activity with exclusively positive gains was a reduction in number of partners, where the three interventions that measured this all produced positive results. Condom use and condom self-efficacy: There were primarily positive gains for both condom use and self-efficacy. Of the seven interventions that were measured, five obtained positive results, one was non-significant, and one achieved a negative result. Of the three that measured condom self-efficacy, all obtained positive results. These results suggest that peer-led

interventions are able to reach large numbers of youth when they are delivered at a scale designed for such reach. They are effective in connecting youth to services and distributing HIV prevention resources. Those that evaluated specific changes among individuals were successful at increasing knowledge. More importantly, several projects also resulted in behavior change to reduce the risk behavior associated with sexual activity: decreasing the number of sexual partners that youth had, increasing condom self-efficacy, and the use of either condoms or contraceptives. Changes in other areas of sexual behavior were not as consistent (Adamchak, 2006).

Macphail and Campbell (2002) pointed out another successful study of peer education, gender and development of critical consciousness: participatory HIV prevention by South African youth. Their research highlighted a number of features of the programme itself, as well as the broader context within which it was implemented, which are likely to undermine the development of the critical thinking and empowerment which they argue are key preconditions for programme success. In relation to the programme itself, these include peer educators' preference for didactic methods and biomedical frameworks, unequal gender dynamics amongst peer educators, the highly regulated and teacher driven nature of the school environment and negative learner attitudes to the programme. In relation to the broader context of the programme, we point to factors such as limited opportunities for communication about sex outside the peer educational setting, poor adult role models of sexual relationships, poverty and unemployment, low levels of social capital and poor community facilities, and point to a number of broader social and community development initiatives that would maximize the likelihood of program success.

This approach yielded an increase in condom use by young people. This was achieved by engagements or discussions within a conceptual framework that emphasizes the role of the development of critical consciousness in the identity and empowerment processes that underlie successful peer education programmes. Such consciousness forms the starting point for the collective renegotiation of young people's social and sexual identities and for the empowerment of young people to change their behaviour in line with such renegotiated identities. Also the awareness of gender as the key ingredient of the critical consciousness that we believe is most likely to encourage behaviour change.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

This section describes the research design of the study, the study population and sampling approach, methods of data collection, plan for data analysis and ethical considerations.

The study draws on the quantitative side of the research to assess the knowledge, attitudes and practices (KAP) of different groups of peer educators (module recipients) and selected students (non-recipients).

3.2. THE KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) STUDY DESIGN

The study was a cross sectional survey, which was conducted from June 2012 to December 2012, and a quantitative method of data collection was used. According to Levin (2006), cross sectional studies are carried out at one time or over a short period. They are usually conducted to estimate the prevalence of the outcome of interest for a given population, and data can be collected on individual characteristics, including exposure to risk factors, alongside information about the outcome. In this way cross sectional studies provide a “snapshot” of the outcome and the characteristics associated with it, at a specific in time.

A cross sectional study gives the benefit of being descriptive in the form of a survey, but the aim is to describe a population or a subgroup within the population with respect to an outcome and a set of risk factors, and the afore-statement falls precisely within the objectives of this study. Welman and Kruger (1994) further add that we may view the cross sectional design in which the different criterion groups typically comprise of different age groups (such as university students or peer educators,) known as cohorts, which are examined in terms of one or more variables at approximately the same time.

So one hundred and fifty (150) peer educators from health and wellness units from different campuses (Pretoria, n=50, Soshanguve n=50 and Ga-rankuwa n=50) were matched with one hundred and fifty (150) registered students also from the same

campuses (Pretoria n=50, Soshanguve n=50 and Ga-rankuwa n=50), at the Tshwane University of Technology.

3.3. STUDY POPULATION AND STUDY SETTING

The study population that was investigated were registered students at Tshwane University of Technology in 2012. The sample comprised of students trained on HIV/AIDS and practicing as peer educators and other students who were not trained on HIV/AIDS.

The study was conducted at Tshwane campuses of the Tshwane University of Technology, being Pretoria, Soshanguve and Ga-Rankuwa. A pre-tested questionnaire that was used in the study of (Shipalana, 2009), was used to gain more insight on peer educators and students' views about knowledge, attitudes and practices related to HIV/AIDS.

This study was informed by the fact that the peer educators were the recipients of the HIV/AIDS intervention module PEHPP, (Peer Education-HIV/AIDS Prevention Programme) meaning that they were trained on the HIV/AIDS issues and received extra lessons (workshops) from other service providers and they were actively involved in health and HIV/AIDS campaigns on campus. Other students did not receive such training. This study assessed the KAP levels of students as compared to peer educators.

3.4. SAMPLING STRATEGIES AND SAMPLE SIZE

The population of Tshwane University of Technology comprised of 49,289 registered students in the year 2012 at six campuses. A three-stage stratified random sampling design was used to select a sample for this study. The campuses were divided into two clusters - Cluster A comprised three campuses located around Tshwane – the Pretoria, Soshanguve and Ga-rankuwa campuses – which had 43,297 students. Cluster B comprised three smaller campuses that are located in Mpumalanga and Limpopo provinces - Mbombela, Emalahleni and Polokwane campuses – which collectively had 5,992 students.

Welman and Kruger (1994) maintain that with a stratified random sample we are ensured of representativeness, irrespective of sample size because it has been built into the sampling strategy right from the very beginning with the fact that the division into two groups may be based on a single variable such as sex (so that there two strata: men and women). It may also involve a combination of more than one variable, for example, sex and age (so that there are strata such as young adult males, young adult females and so on).

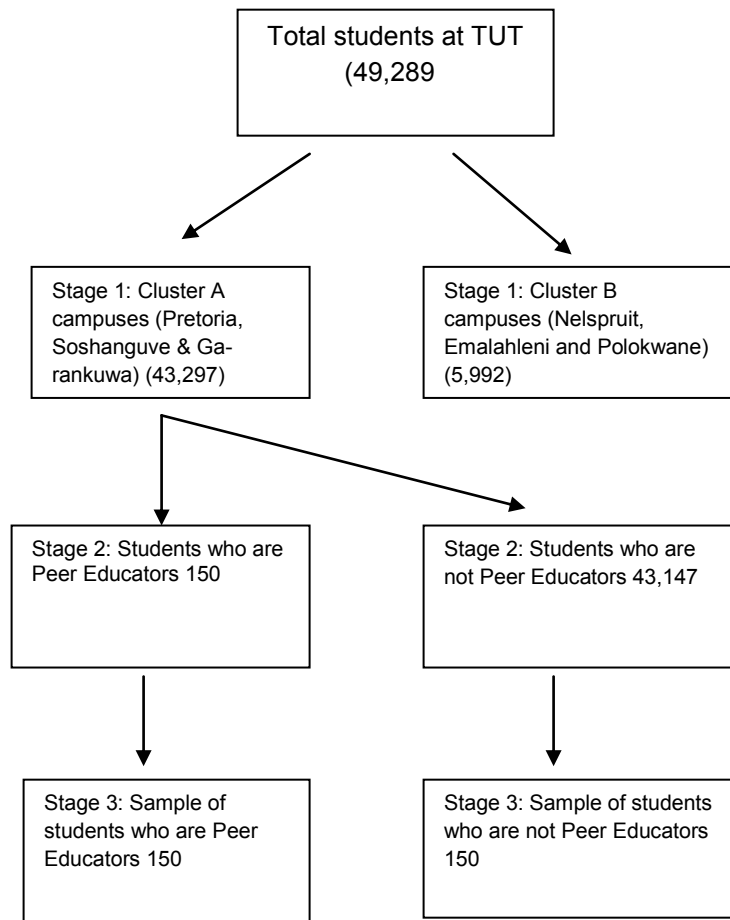
In the first stage the total number of students was stratified according to six campuses that were divided into two clusters of 43 297 students at Pretoria, Soshanguve and Ga-rankuwa campuses and another cluster of 5 992 students based at Nelspruit, Emalahleni and Polokwane campuses.

In stage 2, cluster A (the Pretoria, Soshanguve and Ga-rankuwa or PSG campuses) was selected and the study was conducted among students who are health and wellness peer educators (n=150) and students who are not peer educators (n=150). A sample of 150 peer educators was cross-matched with an equal number of 150 students who are randomly selected from students who are not peer educators.

A total of 300 questionnaires were administered to students and peer educators who were selected to participate in this study. Of those, 208 were completed and returned. Effectively, 108 questionnaires were returned by students and 100 were returned by peer educators.

Cluster A campuses were selected for this study because the researcher is based in Soshanguve and also had access to Pretoria and Ga-rankuwa campuses. Again, there were more peer educators in cluster A than cluster B so it would be cost-effective to use cluster A.

Figure 0: Sampling frame for the study using three-stage stratified sampling design



3.5. DATA COLLECTION

A pre tested questionnaire that was used in the study of Shipalana, (2009), was adopted, modified and used as an instrument for data collection. As a first step, the measuring instrument, together with the proposal was submitted to the Research Ethics Committee of the institution for evaluation and approval, before gaining access to informants and relevant sources of information, and to comply with all the ethical issues of the institution and not to compromise respondents. Confidentiality was guaranteed for respondents in the sense that names were not a prerequisite in completing the form.

The questionnaire was administered to selected respondents to gather information. The questionnaire required information on knowledge, attitudes and practices related to HIV/AIDS, and also open ended questions to be completed by peer educators. It had demographic information and general questions related to peer education and other aspects of HIV/AIDS.

The questionnaire collected data on: Knowledge of HIV/AIDS: This entails the understanding of HIV/AIDS issues such as symptoms, signs, stigma, testing, etc. Attitudes towards HIV prevention measures and people living with HIV (PLHIV): This includes attitudes on HIV/AIDS issues such as multiple concurrent partnerships, condom myths and misinformation or talking openly about sex. Practices related to HIV/AIDS: These include prevention mechanisms that minimize the risks of HIV infections

Table 1: The surveyed issues

1. KNOWLEDGE	<ul style="list-style-type: none"> • The understanding of HIV/AIDS issues, • Transmission, • Prevention and • Protection from HIV/AIDS
2. ATTITUDES	<ul style="list-style-type: none"> • The feelings around HIV/AIDS issues • Multiple concurrent partners, • Condom myths • Caring of PLWA's • Talking openly about sex and • Disclosures etc
3. PRACTICES	<ul style="list-style-type: none"> • Prevention mechanism that minimizes the risks of HIV infections • HIV status • Condom use etc

The following strategies were used in recruiting the participants. Due to the sensitivity of the study three research assistants were trained on how to administer the questionnaires to those who volunteered to be part of the study.

- Peer educators were recruited from their weekly meetings.
- Untrained students were recruited from classes where permission was sought from the lecturers and the questionnaires were outlined to those students who volunteered to be part of the study.
- The campus clinics were also used as recruitment centres, for untrained students coming for morning health talks.
- During the university's major HIV/AIDS campaign "*behind the mask*" it was the last attempt to recruit respondents from the student side.

3.6. PLAN FOR DATA ANALYSIS

Descriptive analysis of data was conducted in the following phases. Firstly, data was entered onto an Excel spreadsheet then transferred to a Statistical Package for Social Sciences (SPSS) file and prepared for analysis.

Secondly, data cleaning was done where the data were inspected, and erroneous data was corrected. Thirdly, data was analysed and the findings of the initial data analysis were documented.

3.7. ETHICAL CONSIDERATIONS

Permission to conduct the study was sought from and granted by the Research Ethics Committee of TUT and the Research Ethics Committee of the University of Stellenbosch. Informed consent was obtained from respondents who took part in the study. All participants were informed that their participation was voluntary. Their completing the questionnaire constituted informed consent as per TUT Ethics committee. They had the right to withdraw from the survey at any time with no negative consequences. No names or addresses were required on the self administered questionnaire. Data has been stored in a safe place. The researcher was the only person who had access to the data. No discomfort or risk was experienced during the study, and lastly there were no undue incentives to those who formed part of the study.

CHAPTER 4: FINDINGS

4.1. INTRODUCTION

This section presents the findings of the study among peer educators and students. A four point Likert scale was used to evaluate knowledge, attitudes and practices using Strongly Agree, Agree, Disagree and Strongly Disagree. Again, open ended questions were used in order to determine issues of training, challenges and recommendations among peer educators.

4.2. DEMOGRAPHIC CHARACTERISTICS

About 300 questionnaires were administered to students and peer educators who were selected to participate in this study. Of those, 208 were completed and returned giving a response rate of 69.3%. Effectively, 108 questionnaires were returned by students and 100 were returned by peer educators giving response rates of 72% and 66.7% respectively. This means that 92 questionnaires were not returned. Various reasons could be cited as the study is of sensitive nature, some peer educators and students could have felt uncomfortable in completing the questionnaire, also others said the questionnaire is time consuming to complete while others said they had lost interest in the study.

Table 2: Gender distribution of respondents

	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
Male	27	25	39	39
Female	81	75	61	61
TOTAL	108	100	100	100

Gender distribution is illustrated in Table 2. There were more female respondents 142 (68%) as compared to male respondents 66 (32%).

Table 3: Year of study of respondents

Year of study	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
First Year	40	37.0	23	23.0
Second Year	43	39.8	45	45.0
Third Year	21	19.4	19	19.0
Fourth Year	4	3.7	9	9.0
Other	-	-	4	4.0
TOTAL	108	100	100	100

In terms of responses according to year of study, on average the majority (42%) of participants were in their second year of study. In fact, 73.6% of participants were in their first two years of study. Specifically there were 37.04% first year students as compared to 23% of peer educators. Also, there were 39.81% second year of students as compared to 45% of peer educators.

Table 4: Location of respondents according to campus

Campus	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
Pretoria	8	7.4	11	11.0
Ga-Rankuwa	31	28.7	15	15.0
Soshanguve	68	63.9	74	74.0
TOTAL	108	100	100	100

Table 4 shows the distribution of the respondents at their respective campuses. It may be observed from the table that the majority (68%) of the respondents were from the Soshanguve campus. In essence, the breakdown was 64% students' vs. 74% peer educators at the Soshanguve Campus.

Table 5: Years since first registration of participants

Years	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
0 – 1 Year	40	37.0	22	22.0
2 Years	40	37.0	45	45.0
3 Years	19	17.6	18	18.0
4 Years or more	9	8.3	15	5.0
TOTAL	108	100	100	100

The distribution in terms of years since first registration of participants is shown in Table 5, 40.9% were on campus for 2 years - 37% of students as compared to 45% of peer educators.

Table 6: Age distribution of respondents

Age	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
<18 years	7	6.5	1	1.0
19-24 years	94	87.0	86	86.0
25-30 years	7	6.5	11	11.0
31 years or more	-	-	2	2.0
TOTAL	108	100	100	100

The age distribution of the respondents is shown in Table 6, the majority of the respondents 86.5% were between the ranges (19-24 years) with 87% being students as compared to 86% of peer educators.

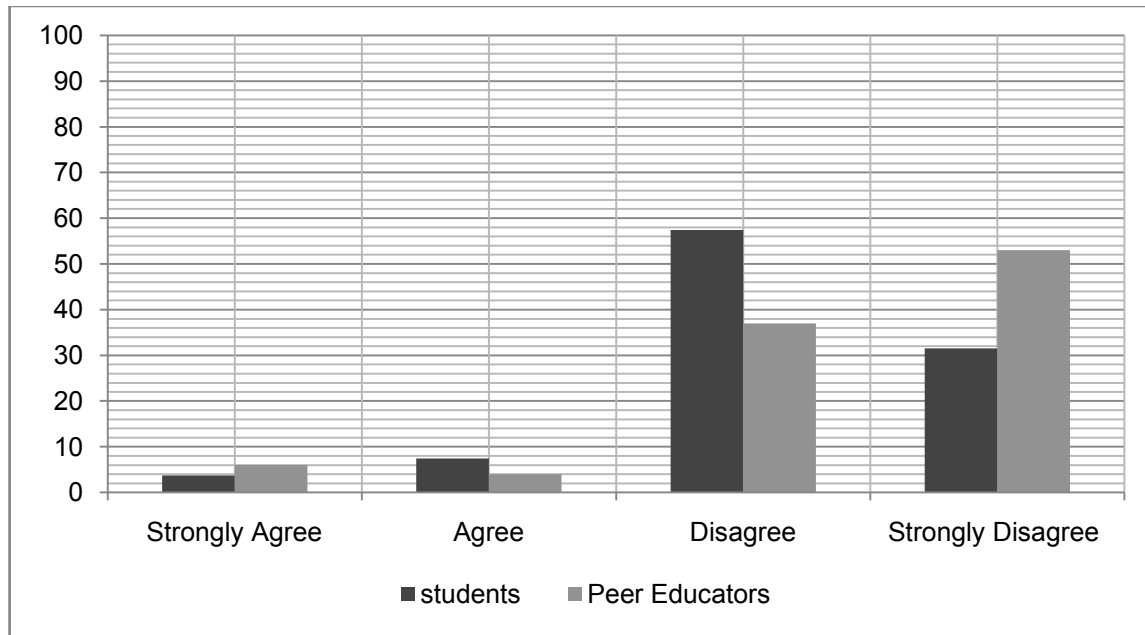
Table 7: Qualifications of respondents

Qualification	Students		Peer educators	
	Frequency	Percentage	Frequency	Percentage
Grade 12	92	85.2	82	82.0
National Diploma	11	10.2	14	14.0
Degree +	5	4.6	4	4.0
TOTAL	108	100	100	100

The majority of the respondents 84.7% and had Grade 12 as their highest qualification, with 85.2% being students as compared to 82% of peer educators, followed by 10.2% of students as compared to 14% of peer educators with a National Diploma.

4.3. KNOWLEDGE ON HIV/AIDS AMONG PEER EDUCATORS AND STUDENTS

This section presents the findings of the study among peer educators and students, on the knowledge of basic HIV/AIDS. The aim was to assess the knowledge levels in terms of understanding of HIV/AIDS issues. These knowledge levels were around issues such as transmission, prevention and protection of HIV/AIDS.

Figure 1: Difference between HIV and AIDS

The majority of respondents as reflected in Figure 1, 88.9% of students as compared to 90% of peer educators strongly disagree or disagree that there is no difference between HIV and AIDS. Therefore there is no difference between students and peer educators with respect to knowledge about (the difference between) HIV and AIDS. Whilst students yielded 11.1% as compared to 10.0% of peer educators; they share the view of strongly agree or agree that there is no difference between HIV and AIDS.

The results indicate that there are exceptionally high levels of knowledge among both groups that there is a difference between HIV and AIDS. Of concern is the 11.1% of students and 10.0% of peer educators who responded that there is no difference between HIV and AIDS. Basic HIV/AIDS training on campus will help in empowering our students to high competency levels of HIV/AIDS,

Figure 2: Knowledge on whether tears are a risk factor in the transmission of the HIV.

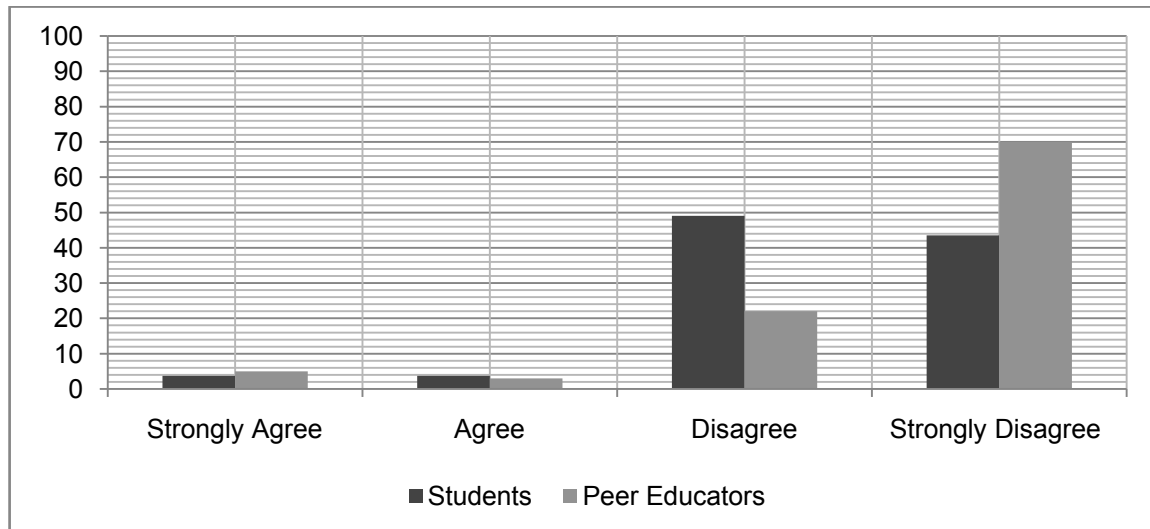
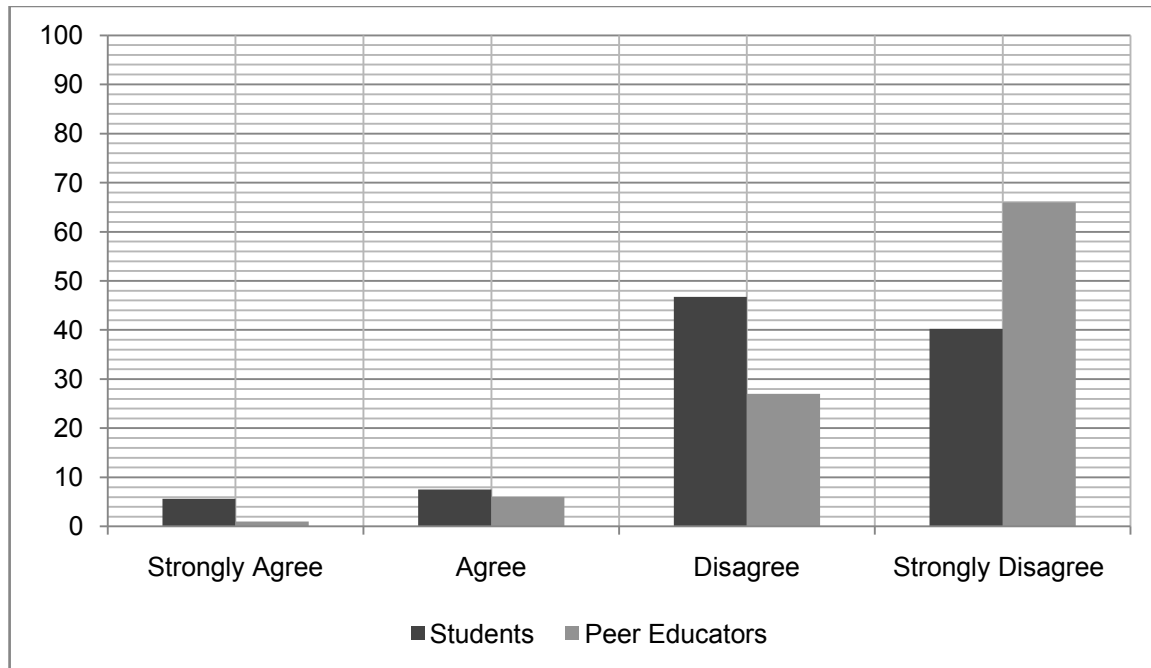


Figure 2 indicates that 92.6% of students as compared to 92.0% of peer educators strongly disagree or disagree that tears are one of the bodily fluids that have been identified as being a risk factor in the transmission of the HIV. Therefore there is no difference between students and peer educators with respect to knowledge that tears are a risk factor in the transmission of the HIV. A total of 7.40% of students as compared to 8.00% of peer educators strongly agree or agree that tears are one of the bodily fluids that have been identified as being a risk factor in the transmission of the HIV, which is not the case.

The results indicate that the majority of respondents have a thorough understanding that tears are not a risk factor in terms of HIV transmission. However the low percentage of both students 7.40% and peer educators 8.00% needs training.

Figure 3: Knowledge on whether one can get HIV from mosquito bites.

The opinion of the majority of the respondents as reflected in Figure 3; shows that 86.9% of students as compared to 93.0% of peer educators strongly disagree or disagree that one can get HIV from mosquito bites. The difference between students and peer educators is 6.5% with respect to knowledge about the transmission of HIV from mosquito bites. 13.1% of students as compared to 7.0% of peer educators share the view of strongly agree or agree that you can get HIV from mosquito bites. A total number of 0.9% of student didn't respond to this question.

In general the majority of respondents have information regarding the transmission of HIV, with regards to mosquito bites, that they do not transmit HIV.

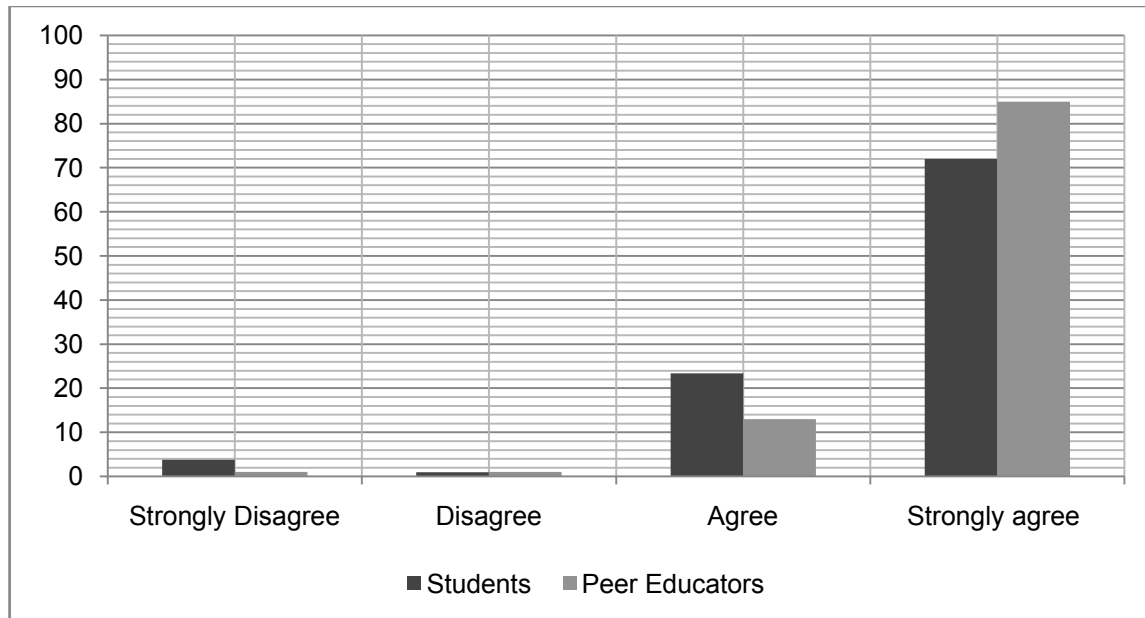
Figure 4: Wearing gloves is essential when assisting a person who is bleeding

Figure 4 indicates that 95.3% of students as compared to 98.0% of peer educators strongly agree or agree that wearing gloves is essential when assisting a person who is bleeding. Therefore there is not much of a difference between students and peer educators with respect to knowledge with this issue of wearing gloves. The minority of participants 4.7% of students as compared to 2.0% of peer educators strongly disagree or disagree and maintain that it is not essential to wear gloves when assisting a person who is bleeding. 0.9% of students didn't respond to this question.

This indicates that there are exceptionally high levels of knowledge and competencies among both groups about the blood as mode of HIV transmission.

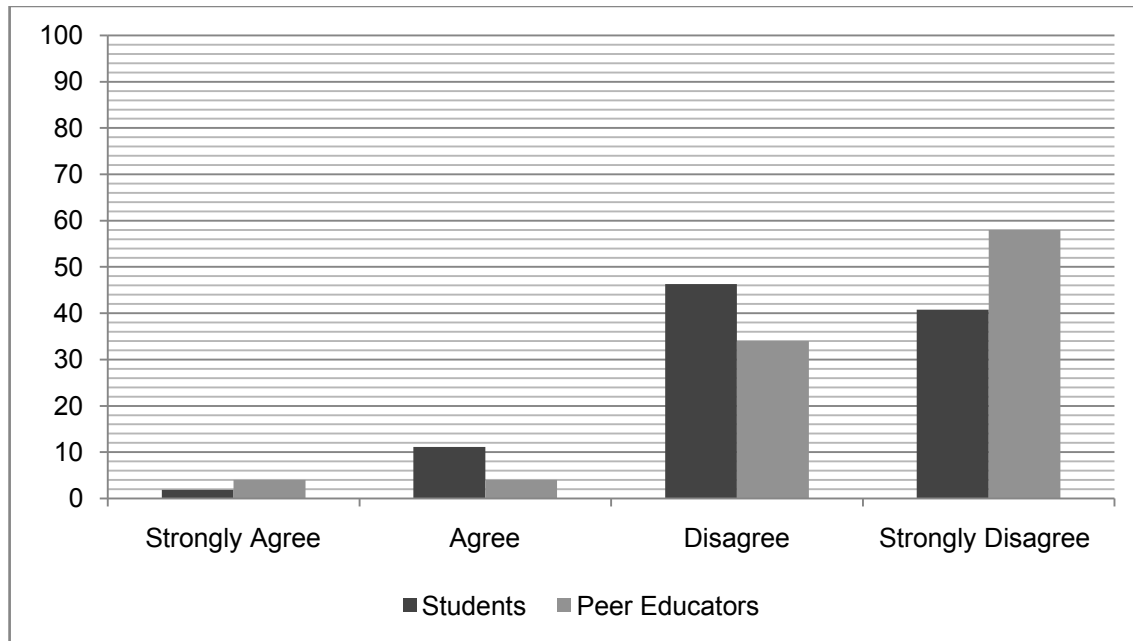
Figure 5: There is a cure for AIDS.

Figure 5 shows that 87% of students as compared to 92% of peer educators strongly disagreed or disagreed that there is a cure for AIDS. Therefore difference between students and peer educators with respect to knowledge about a cure for AIDS is small. The minority of participants 13% of students as compared to 8% of peer educators strongly agreed or agreed and maintained that there is cure for AIDS. The HIV educational programme needs to be stepped up with regard to this issue, as the only available treatment for the management of HIV is the ARV's.

This indicates that there are exceptionally high levels of knowledge and competencies regarding the treatment of people living with HIV. Of concern is the 8.00% of peer educators who responded that there is cure for AIDS.

Figure 6: HIV/AIDS is a private matter; I do not discuss it with anyone

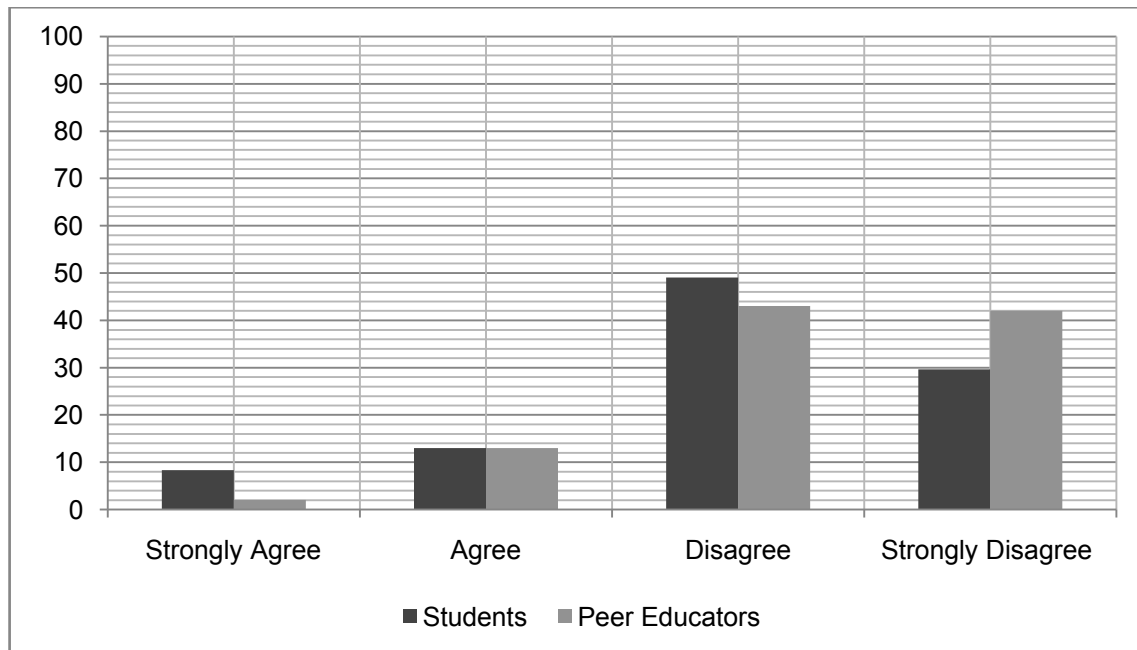


Figure 6 shows that a total of 78.7% of students as compared to 85% of peer educators strongly disagreed or disagreed, that HIV/AIDS is a private matter and that they would not discuss it with anyone. There is difference of 6.3% between students and peer educators with respect to this item whereas 21.3% of students as compared to 15% of peer educators strongly agreed or agreed to keep this as a private matter.

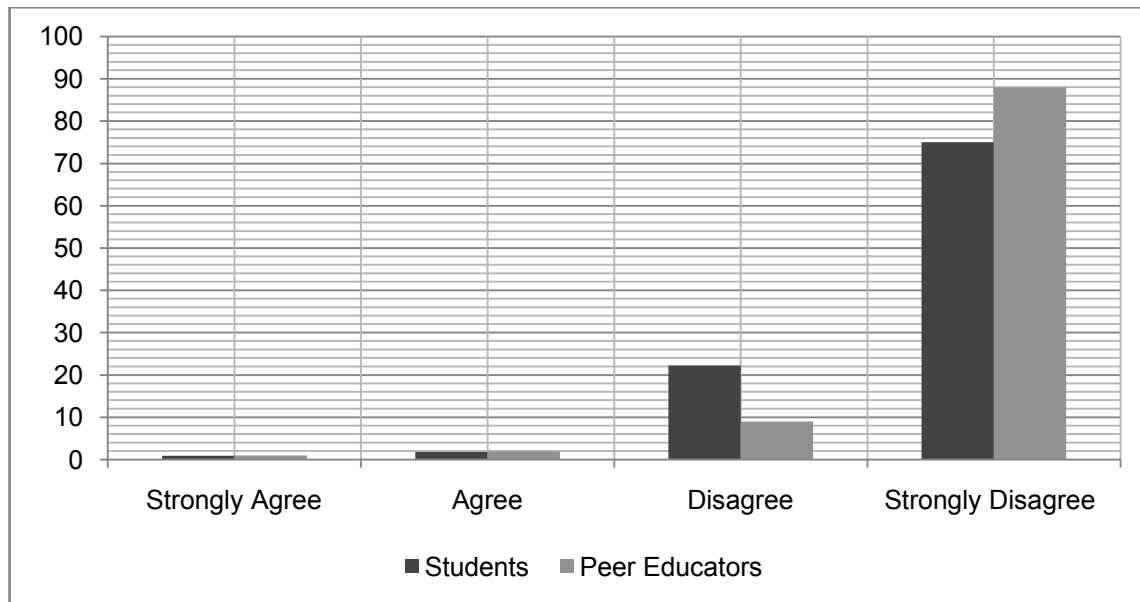
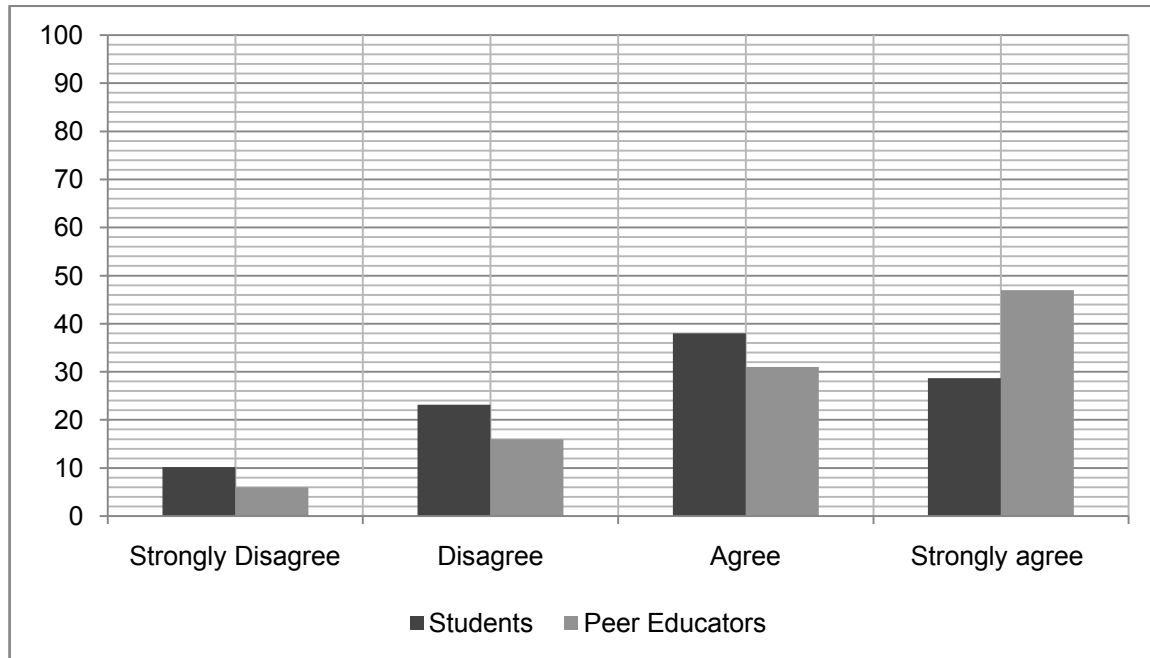
Figure 7: Having sexual intercourse with a virgin can cure AIDS.

Figure 7 shows that 97.2% of students as compared to 97% of peer educators strongly disagreed or disagreed, that having sexual intercourse with a virgin can cure AIDS. According to the results there is an insignificant difference of 0.22% between students and peer educators with respect to knowledge that having sexual intercourse with a virgin can cure AIDS.

This shows some competencies with regards to HIV/AIDS. The minority of participants, 2.78% of students as compared to 3.00% of peer educators strongly agreed or agreed and maintained that having sexual intercourse with a virgin can cure AIDS. This myth will have negative implication in the fight against HIV/AIDS, and hence training and sharing of correct information is required.

4.4. ATTITUDES TOWARDS HIV/AIDS AMONG PEER EDUCATORS AND STUDENTS

Figure 8: I know someone who is HIV positive



Two-thirds of participants 66.7% of students as compared to more three-quarters, 78% of peer educators strongly agree or agree that they know someone who is living with HIV/AIDS. The remaining one-third, 33.3% of students as compared to 22% of peer educators strongly disagree or disagree that they do not know someone who is living with a virus.

Figure 9: Relationship with the HIV positive person

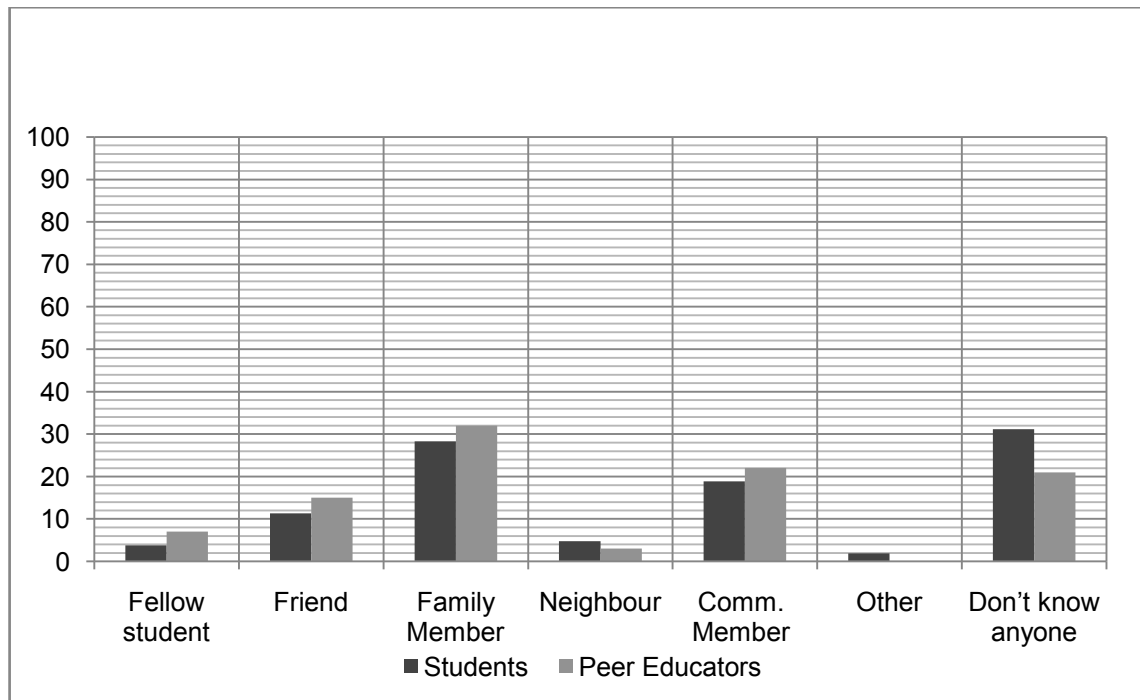


Figure 9 shows 68.9% of respondents had a relationship with an HIV person who may be fellow students, 3.8%, 11.3% their friends, 28.3% family members, 4.7% their neighbours who are infected with HIV, 18.9% their community members and lastly 1.89% indicated others. 79.0% of peer educators, 7.0% indicated that it is their fellow students that they know, 15.0% their friends, 32.0% family members, 3.0% their neighbours who are infected with HIV, 22.0% revealed to know community members.

Less than one-third, 31.3% of students as compared to 21.0% of peer educators responded that they do not know anyone who lives the HIV and they have no relationship.

Figure 10: If a student shares a desk with a person who is HIV positive, there is a high risk of being infected.

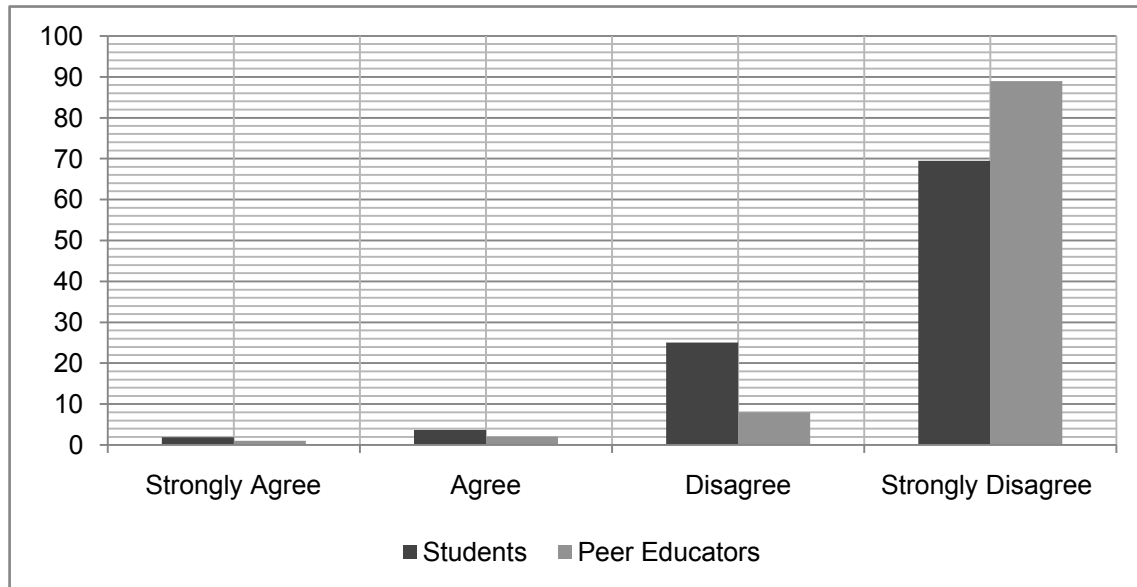


Figure 10 shows that 74.5% of students, compared to 97.0% of peer educators strongly disagree or disagree that there is a high risk of being infected when sharing a desk with a person who is HIV infected. However 5.6% of students, compared to 3.0% of peer educators strongly agree or agree that there is a risk of being infected. The knowledge and practice level of peer educators as compared to students is a bit high with regard to this issue.

Though there is a significant difference in percentages between respondents, this shows that both students and peer educators have knowledge about modes of transmission. The majority of the respondents have a positive attitude towards PLWA's.

Figure 11: Children who are HIV positive should be allowed to mix with other children.

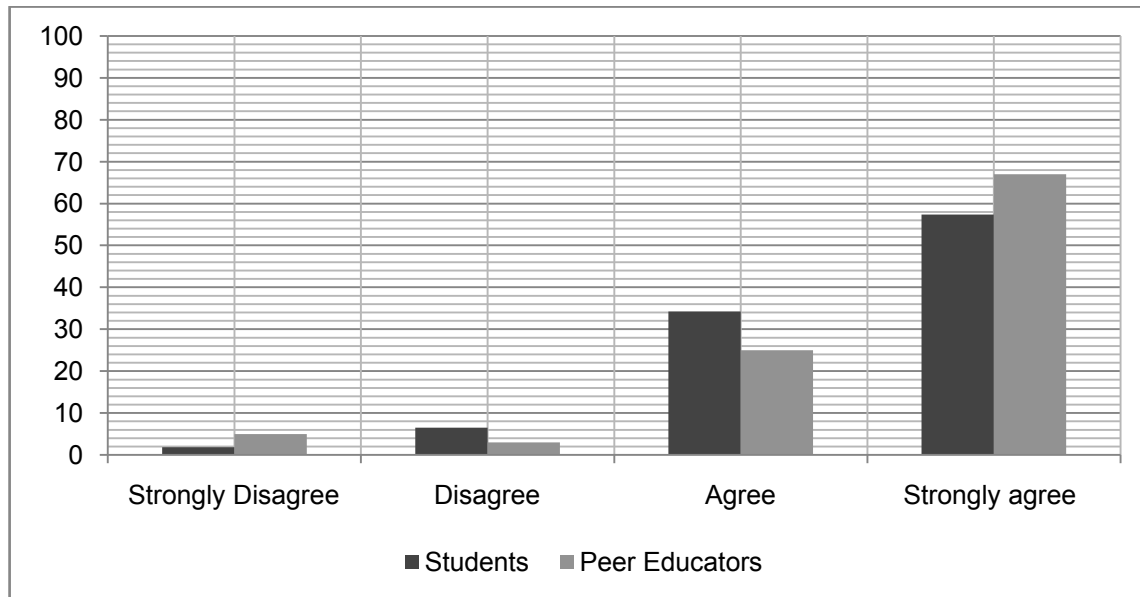
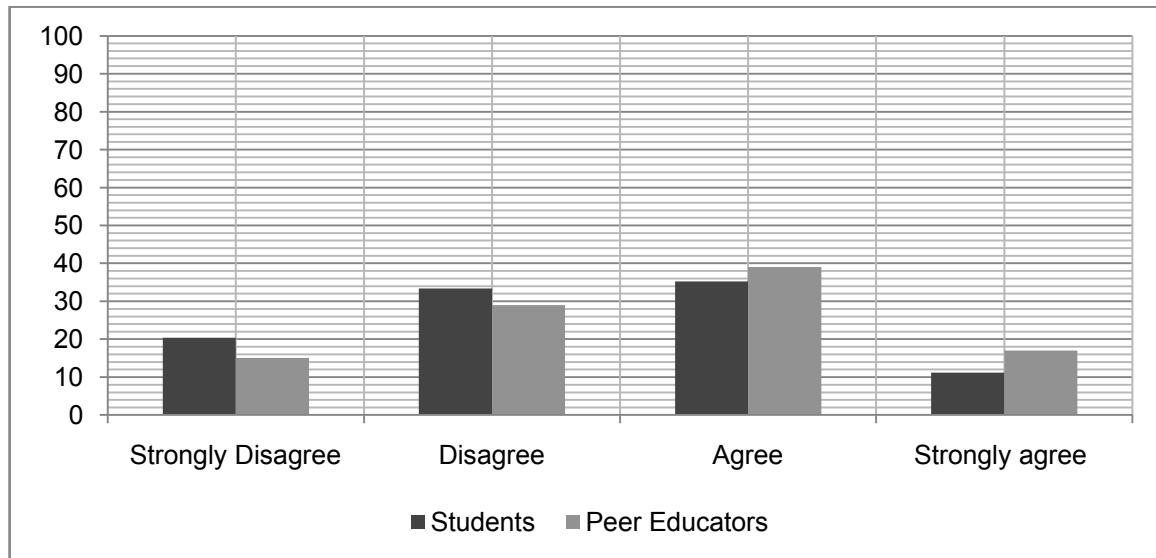


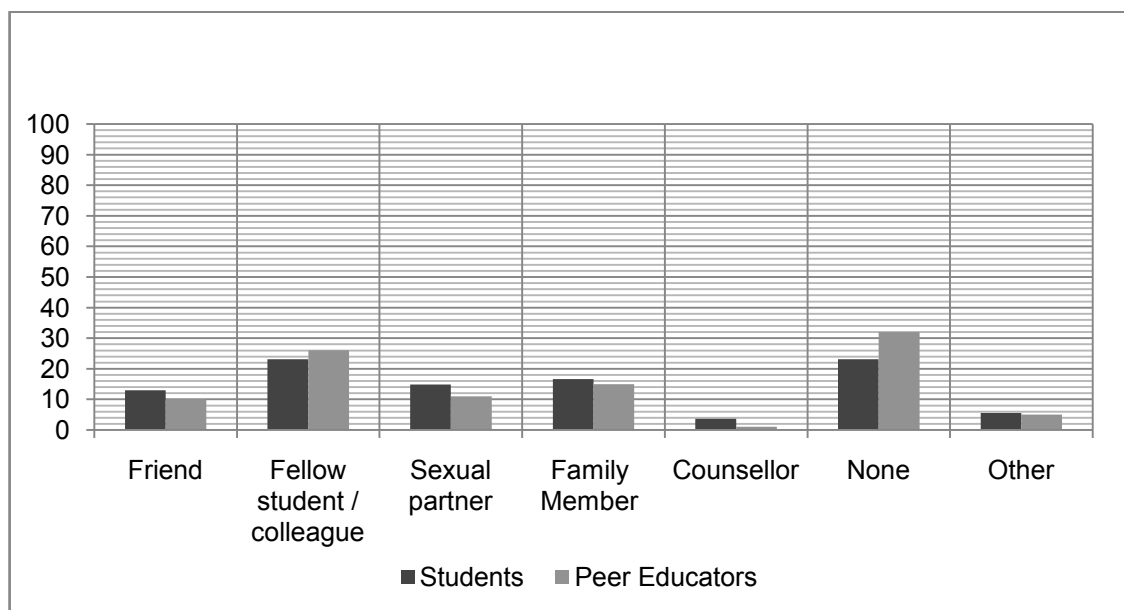
Figure 11 shows that 91.7% of students, compared to 92.0% of peer educators strongly agree or agree that children should be allowed to mix regardless of their status, whilst 7.3% of students as compared to 8% of peer educators, have a negative opinion. This reflects an element of stigma and discrimination regarding HIV.

There is no significant difference between students and peer educators that children should be allowed to mix regardless of their status. This response shows empathy towards the children living with HIV.

Figure 12: Disclosure of HIV status following an HIV positive test

The participants responded to this very sensitive and emotional question with mixed reactions. Figure 12 shows that 53.7% of students, compared to 44% of peer educators strongly disagree or disagree that they will not disclose their status if they tested positive, whilst 46.3% of students as compared to 56% of peer educators, responded by strongly agreeing or agreeing that they will disclose their status. It can be observed here again that there is fear of stigma and discrimination even rejection for those who strongly disagreed or disagreed on going public with their HIV status.

Figure 13: Who would you not disclose your HIV status to, if you tested HIV positive?



According to Figure 13, 13% of students would not disclose their status to friends, 23.2% do not have confidence in their fellow students/colleagues, 14.8% to sexual partners 16.7% would not disclose to their family members, 3.7% to the counsellors, 23.2% would not disclose to anyone and 5.6% would not disclose to others.

Peer educators share the same sentiments but at different levels: 10% of peer educators would not disclose their status to friends, 26% do not have confidence in their fellow students/colleagues, 11% to sexual partners, 15% would not disclose to their family members, 1% to the counsellors, 32% would not disclose to anyone and 5% would not disclose to other people.

Figure 14: Ability to take care of someone who is infected with HIV or dying from AIDS related disease

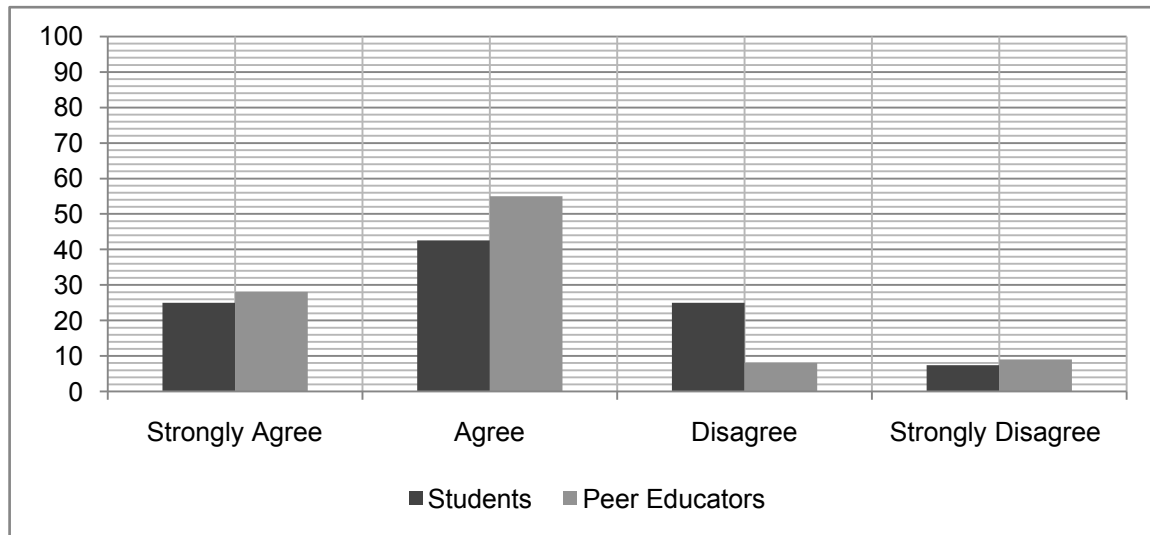


Figure 14 shows that 67.6% of students as compared to 83% of peer educators strongly agreed or agreed that they were able to take care of someone who is infected with HIV or dying from AIDS related diseases. This shows an element of maturity and positive attitude in caring of people living with HIV from peer educators as there is significant difference in percentage as compared to students. 32.40% of students as compared to 17.00% of peer educators strongly disagreed or disagreed.

Figure 15: In a sexual relationship, only women should be responsible for the prevention of HIV transmission

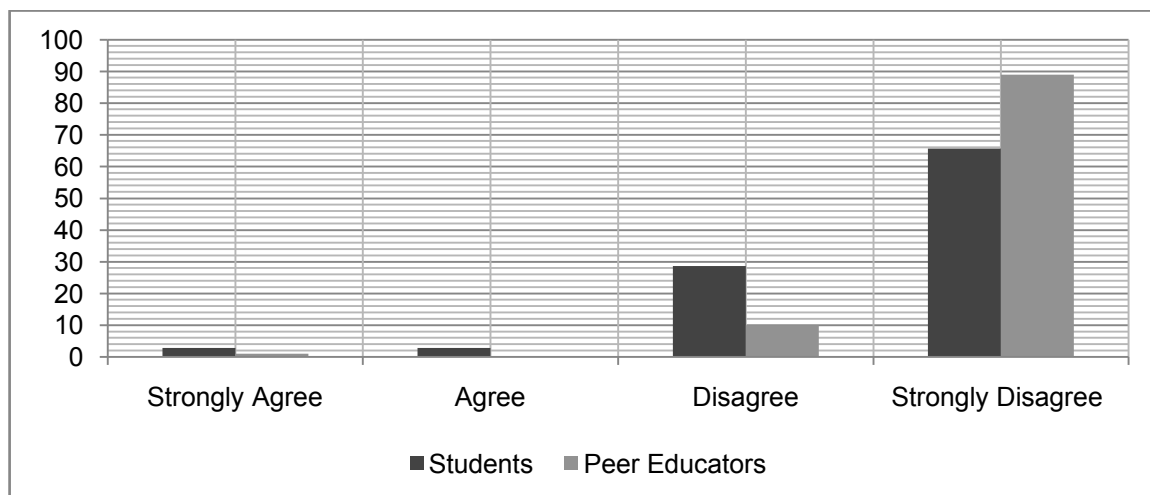
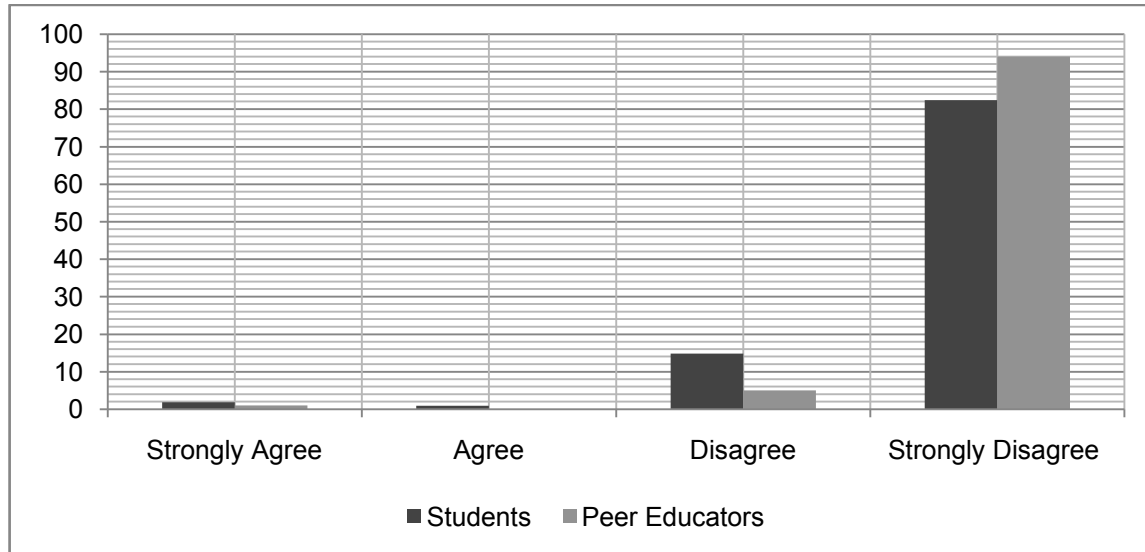


Figure 15 shows that 94.4% of students as compared to 99% of peer educators strongly disagreed or disagreed that it is not only the responsibility of women for the prevention of HIV transmission in a sexual relationship. There was a high competency level of HIV prevention knowledge, in that it is the responsibility of all to take charge. 5.6% of students as compared to 1% of peer educators strongly agreed or agreed.

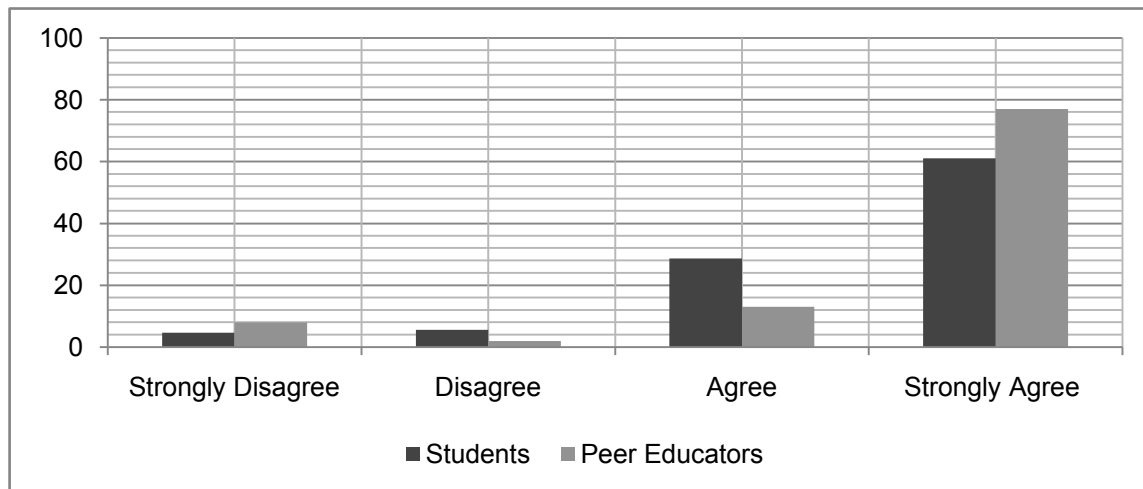
Figure 16: Only black people can get HIV.



The participants' responses in Figure 16 show that 97.22% of students, compared to 99.00% of peer educators strongly disagree or disagree that only black people can get HIV. Therefore there is no difference between students and peer educators with respect to this question of race. The understanding of HIV/AIDS issues shows that HIV knows no colour, race and gender. Everyone is at risk.

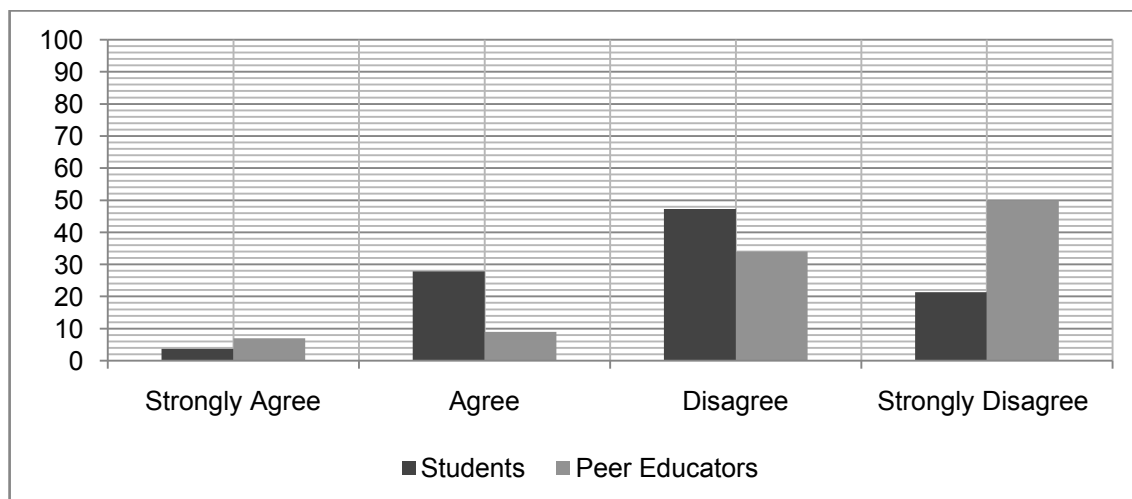
Whilst 2.78% of students as compared to 1.00% of peer educators, responded by strongly agree or agree.

Figure 17: People with many sexual partners are at a greater risk of contracting HIV



The response in Figure 17 shows that 89.8% of students as compared to 90% of peer educators strongly agreed or agreed that having many sexual partners is a greater risk of contracting HIV. Therefore there is no significant difference between students and peer educators with respect to knowledge about this response on MCP. The one love concept is filtering to students in terms of minimizing the risk of being infected by HIV. 10.2% of students as compared to 10% of peer educators strongly disagreed or disagreed.

Figure 18: Students who do not feel comfortable to demonstrate the utilization of male and female condoms to fellow students or community members.



According to Figure 18, 68.5% of students as compared to 84% of peer educators strongly disagreed or disagreed, this means that they are comfortable to demonstrate the utilization of male and female condoms to their fellow students or community members. This indicates a high competency level of HIV prevention of both male and female condom; we note the significant difference in percentages.

31.5% of students as compared to 16% of peer educators strongly agreed or agreed that they are not comfortable to do some condom demonstration. This calls for an intervention in terms of consistent correct condom use (CCCU) awareness.

4.5. HIV/AIDS PRACTICES OF PEER EDUCATORS AND STUDENTS AT TUT

Figure 19: There are no benefits in knowing one's HIV status.

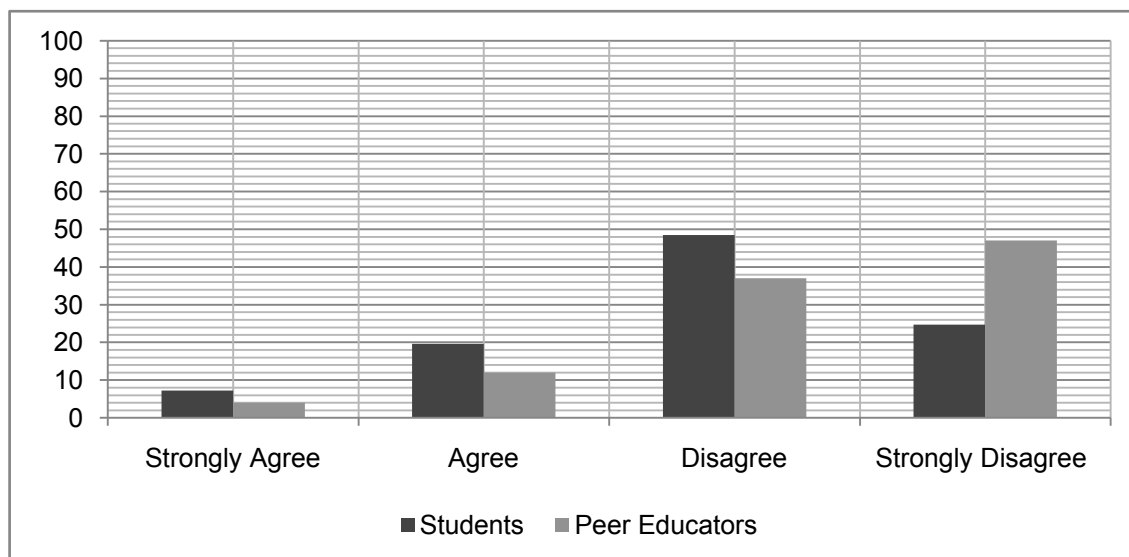


Figure 19 shows that 73.2% students, compared to 84% of peer educators strongly disagree or disagree that there are no benefits in knowing one's HIV status. They have a positive attitude towards knowing their status.

Whilst 26.8% of students as compared to 16% of peer educators see no benefit in knowing their status. A total number of 10.2% of students didn't respond to this question.

Figure 20: I will not participate in a HCT [HIV Counselling and Testing] campaign

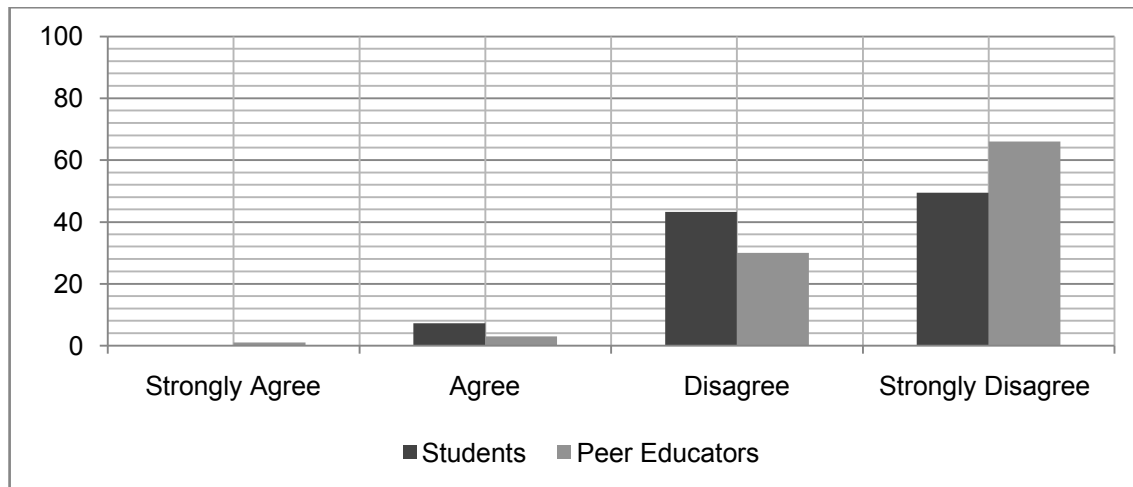


Figure 20 shows that 92.9% of students, compared to 96% of peer educators strongly disagree or disagree that they will not participate in an HCT [HIV Counseling and Testing] campaign. The respondents see benefits in participating in HCT campaigns and knowing their status. Approximately 7.2% of students as compared to 4% of peer educators see no need to participate in such intervention. A total number of 10.2% of students didn't respond to this question.

Figure 21: When last did you go for HIV testing?

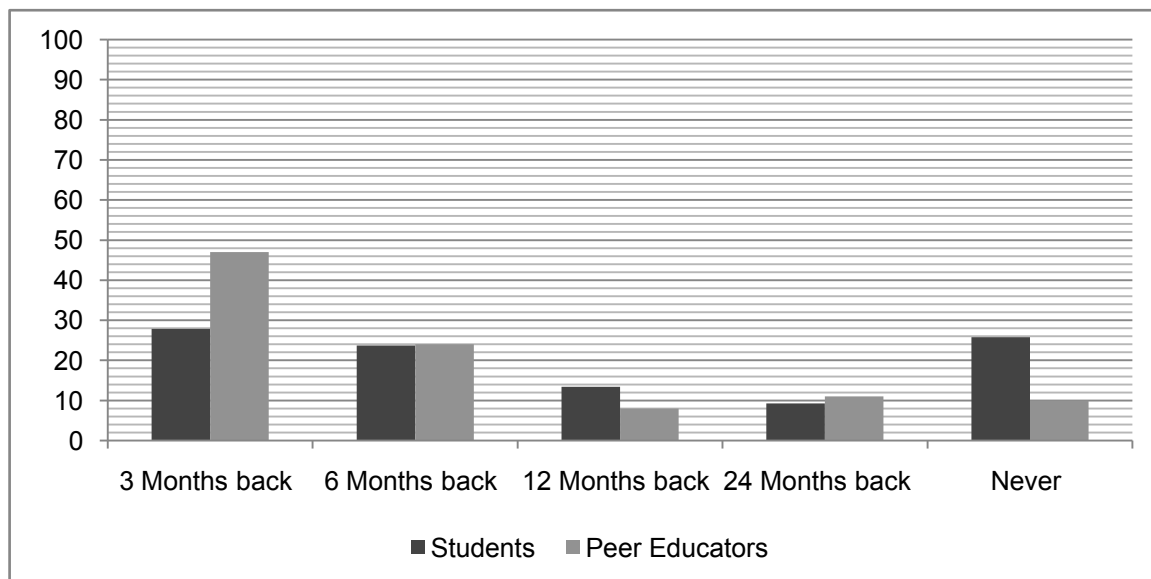


Figure 21 shows the finding that reveal the following: 27.84% of students, compared to 47.00% of peer educators have tested 3 months ago, and 23.71% of students, compared to 24.00% of peer educators have tested 6 months ago, 13.40% of students, compared to 8.00% of peer educators have tested 12 months ago, 9.28% of students, compared to 11.00% of peer educators have tested 24 months ago.

It is interesting to note that 25.8% of students, compared to 10% of peer educators have never tested. A total number of 10.2% of students didn't respond to this question. In fighting HIV, the HCT campaigns needs to be done regularly in 3 months cycles.

Figure 22: Students who believe it is appropriate to conduct HCT at the university.

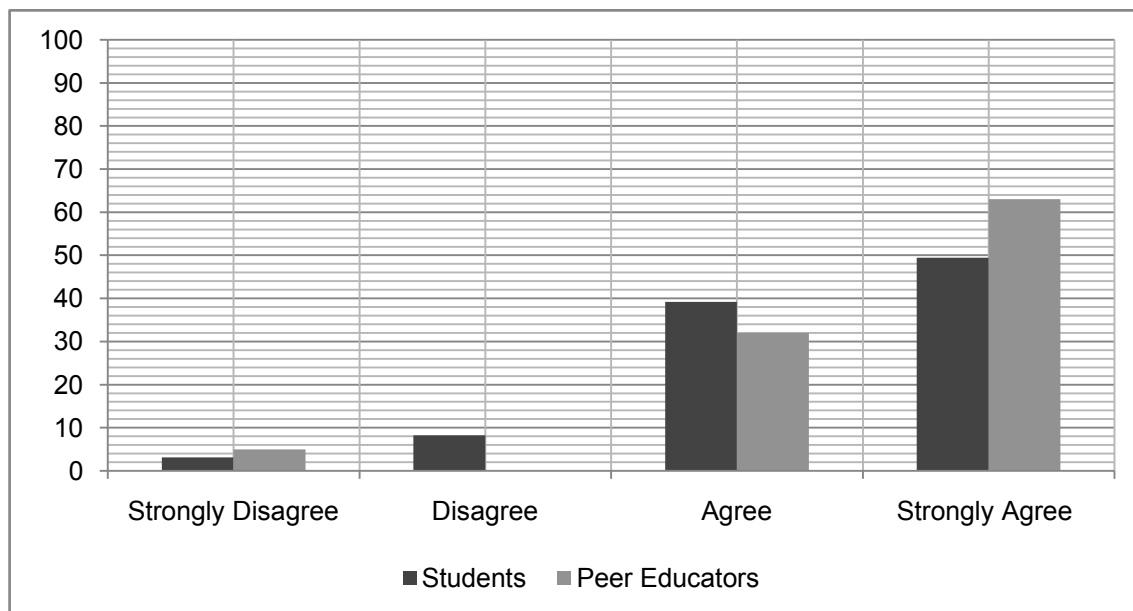


Figure 22 indicates that 88.7% of students as compared to 95% of peer educators strongly agree or agree that it is appropriate to conduct HCT [HIV Counseling and Testing] at the university, as this promotes healthy lifestyle in terms knowing one's status and making responsible decisions with regards to lifestyle.

The remaining participants 11.3% of students as compared to 5% of peer educators strongly disagree or disagree were of the opinion that it is not appropriate to conduct HCT [HIV Counseling and Testing] at the university. A total number of 10.20% of students didn't respond to this question.

Figure 23: I have been shown how to use a condom by a professional coordinator/trainer.

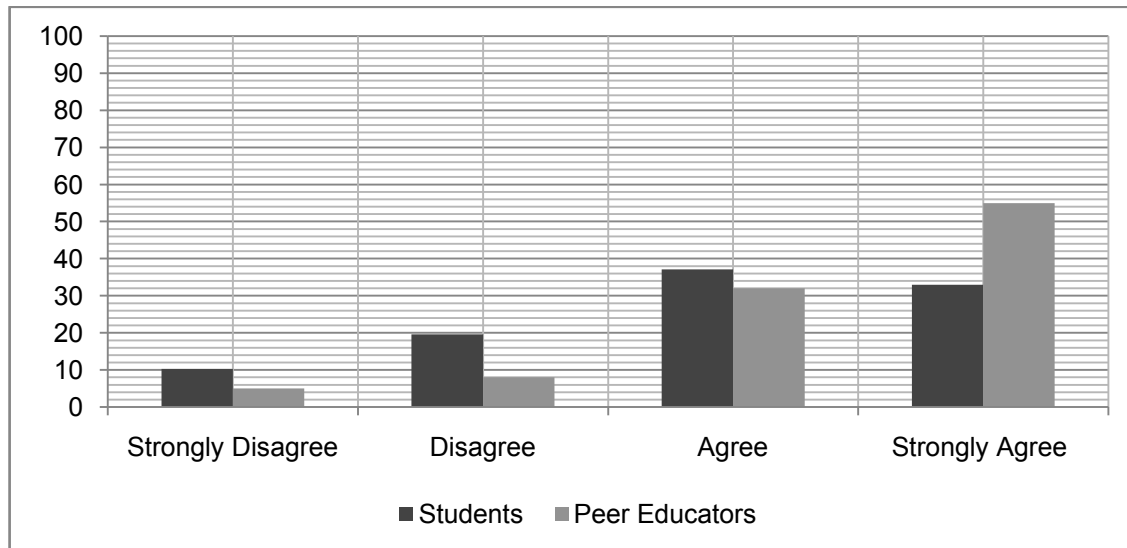


Figure 23 shows that 69.1% of students as compared to 87% of peer educators strongly agreed or agreed that they have been demonstrated to on how to use a condom by a professional coordinator/trainer. The remainder of participants 29.9% of students as compared to 13% of peer educators strongly disagreed or disagreed. A total number of 10.2% of students didn't respond to this question.

Figure 24: Always use a condom when having sex.

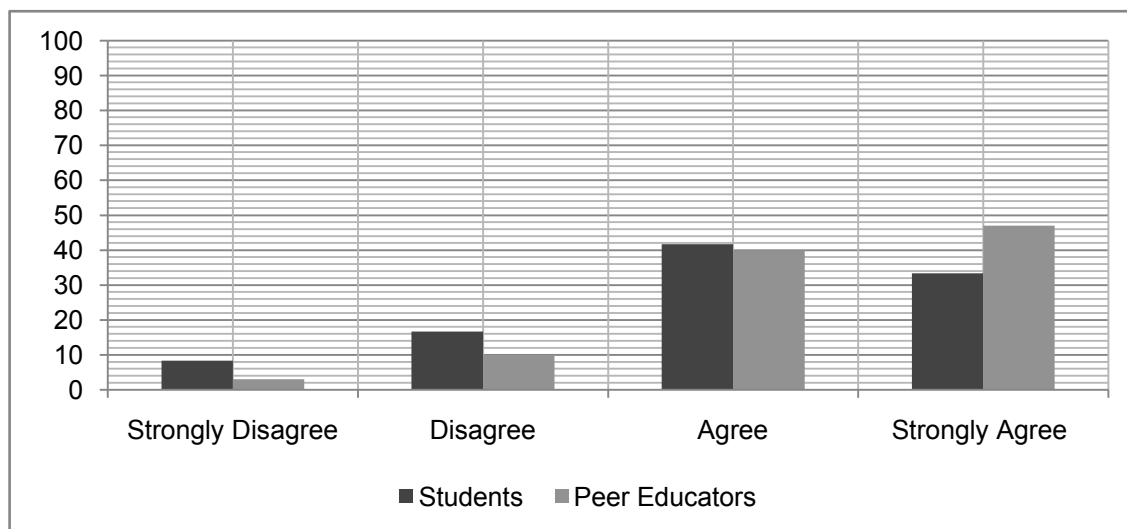


Figure 24 reveals that 75% of students as compared to 87% of peer educators strongly agreed or agreed that they use protection when engaging in sexual activity.

The remainder of the participants; 25% of students as compared to 13% of peer educators strongly disagreed or disagreed. There is another angle in those who responded of not using condoms, either the participants are not sexually active or protection is not used at all. In the latter case, one is subjecting himself/herself to HIV even STI's infection. 10.18% of students didn't respond to this question.

Figure 25: Students who believe that condoms prevent HIV transmission.

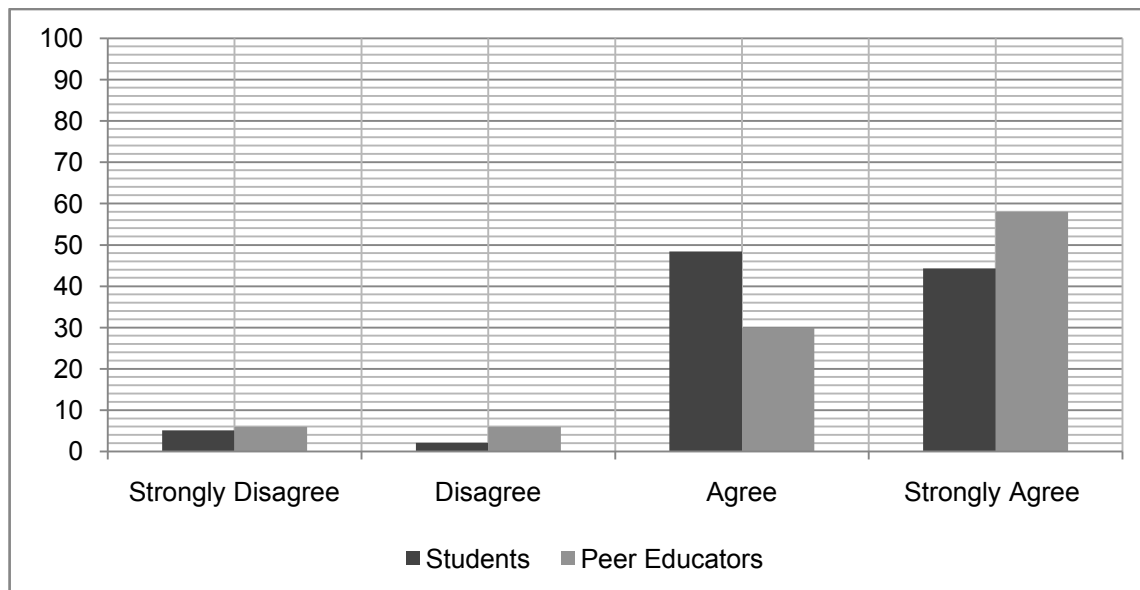


Figure 25 reveals that 92.8% of students as compared to 88% of peer educators strongly agreed or agreed on this issue that condoms can prevent transmission of HIV, if properly used (CCCU). This finding reveals a high percentage of condom agreement from both students and peer educators, that it can prevent transmission of HIV.

The remainder of 7.21% of students as compared to 12% of peer educators strongly disagreed or disagreed. 10.18% of students didn't respond to this question.

Figure 26: Under which circumstances would you not wear a condom?

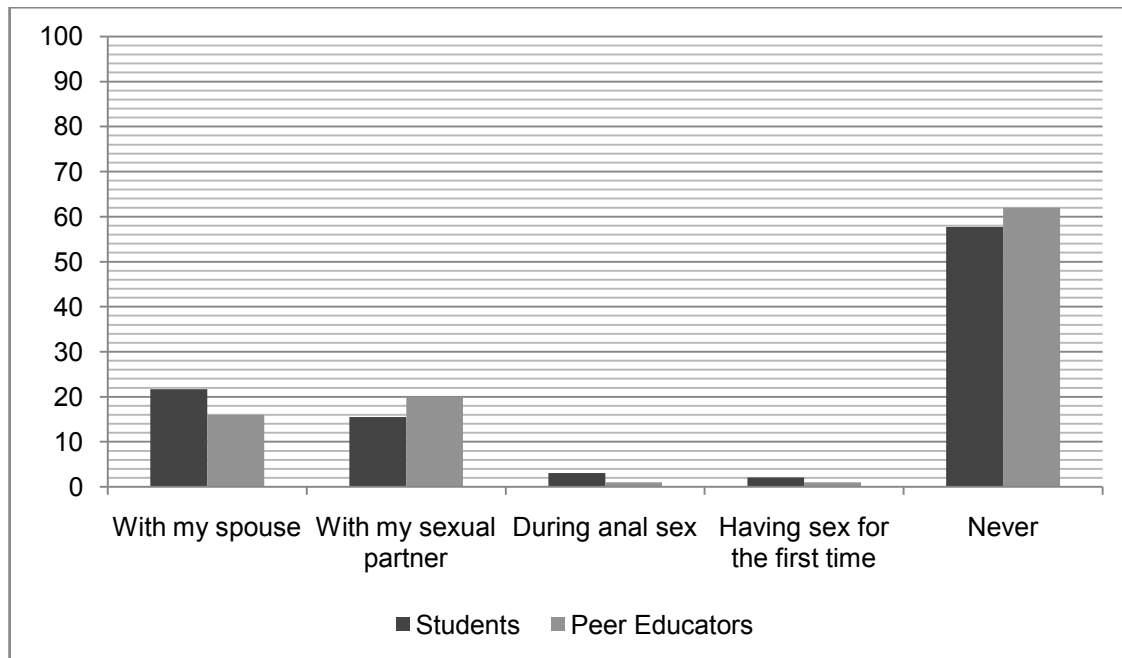
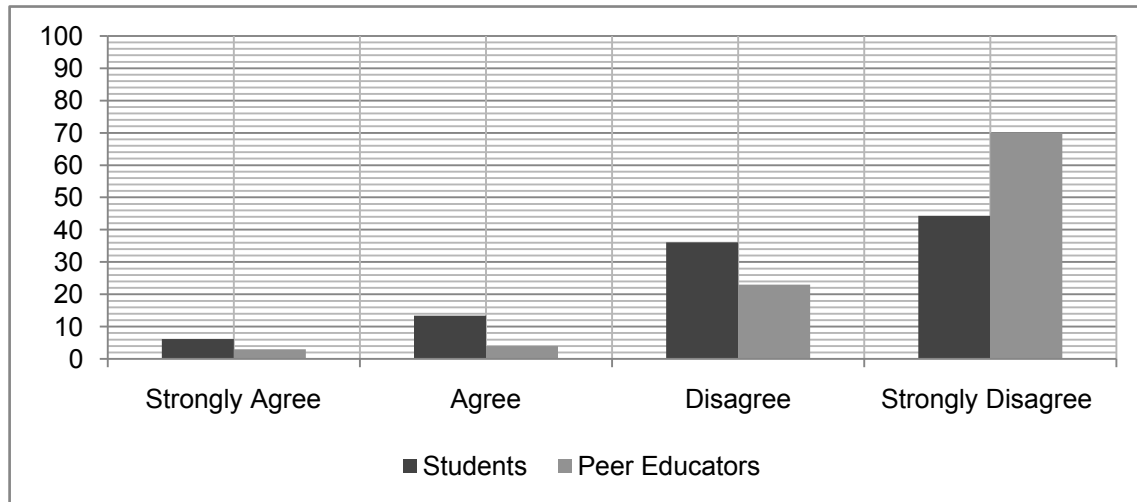


Figure 26, indicates that 21.7% of students, would not use a condom with their spouse, 15.5% with their sexual partner, 3.1% during anal sex, 2.1% on sex debut, while 57.7 reported that they will use protection irrespective of circumstances.

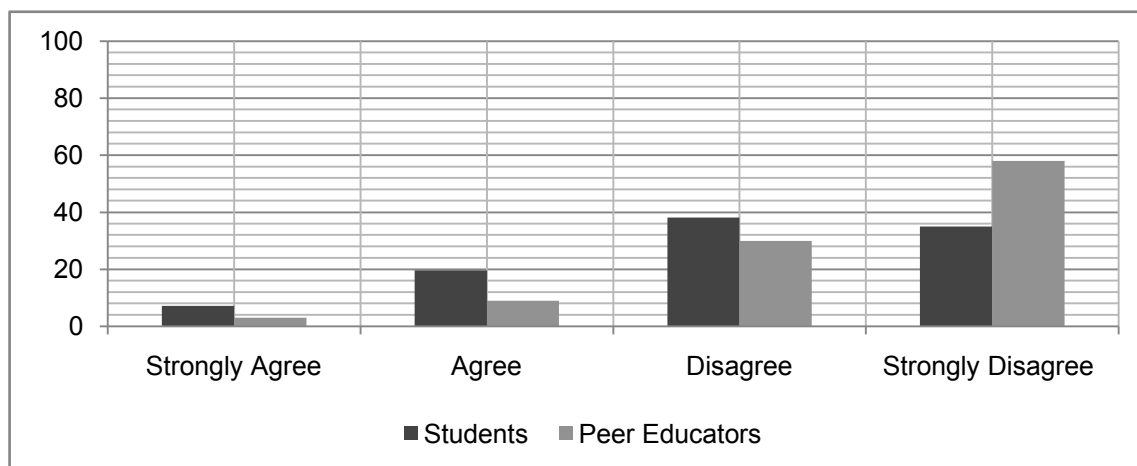
The peer educators also share the same sentiments but at different percentages: 16% of peer educators, would not use a condom with their spouse, 20% with their sexual partner, 1% during anal sex, 1% on sex debut and 62% reported that they will use protection irrespective of circumstances.

Figure 27: People who engage in an unprotected anal sex are not at risk of contracting HIV.



According to Figure 27, 80.4% of students, compared to 93% of peer educators strongly disagree or disagree in that people who engage in an unprotected anal sex are not at risk of contracting HIV. This shows the acquired knowledge of HIV converted into practice, that this activity is a high risk of contracting HIV also bacteria. 19.6% of students as compared to 7% of peer educators, strongly agree or agree that unprotected anal sex is not a risk practice. A total number of 10.2% of students didn't respond to this question.

Figure 28: When engaging in an unprotected sexual activity, I do not think about HIV infection as a risk to my partner or myself



The participants responded as follows: Figure 28 shows that 73.2% of students, compared to 88% of peer educators strongly disagree or disagree that when engaging in an unprotected sexual activity, they do not think about HIV infection as a risk to my partner or myself. They show a positive attitude and practice in protecting themselves and partners. 26.8% of students as compared to 12% of peer educators responded with a different opinion from the peers. About 10.2% of students didn't respond.

Figure 29: People who tested HIV positive should not have sexual intercourse.

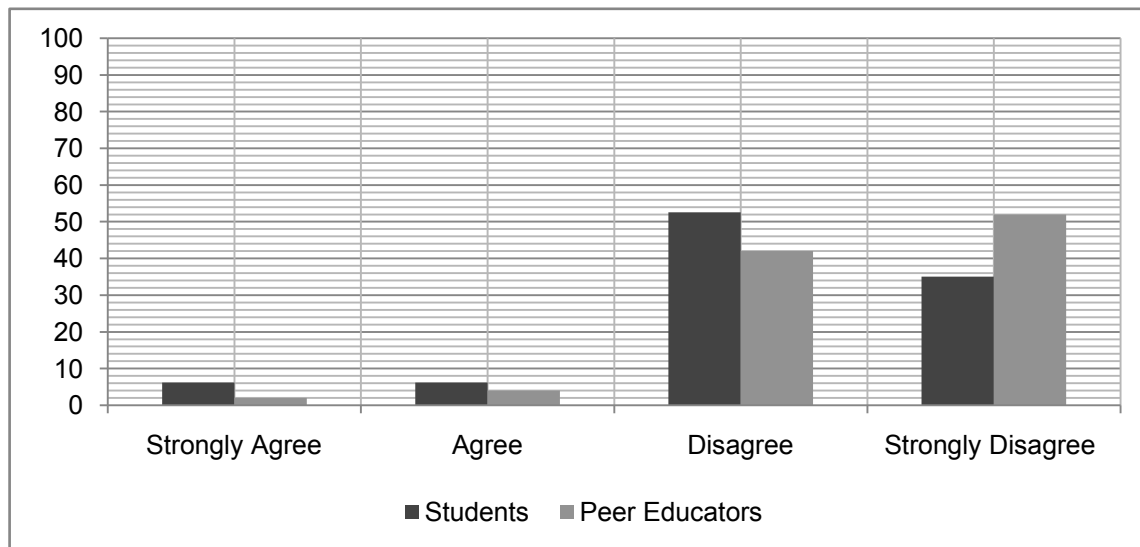


Figure 29 shows that 87.6% of students, compared to 94% of peer educators strongly disagree or disagree that people who tested HIV positive should not have sexual intercourse. This reflects a positive attitude and practice towards people living with HIV.

12.4% of students as compared to 6% of peer educators responded with a different opinion from the peers in that people, who are living with the HIV should refrain from sexual intercourse. A total of 10.2% of students didn't respond to this question.

Figure 30: People who practice sexual acts like unprotected anal sex deserve to get HIV.

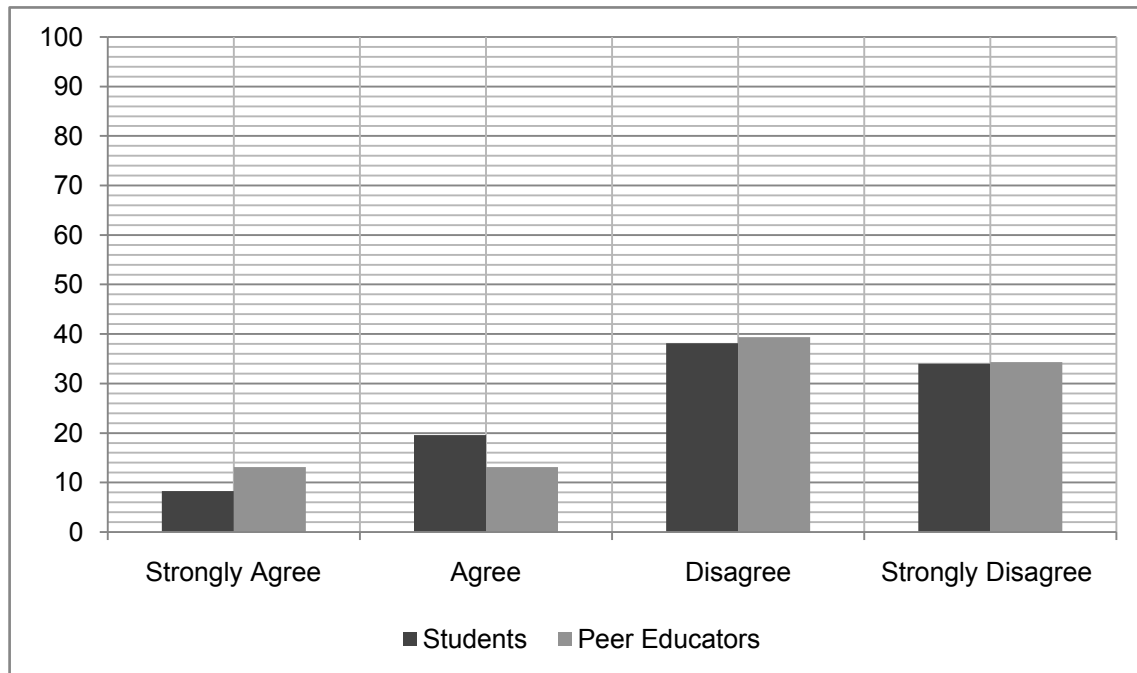
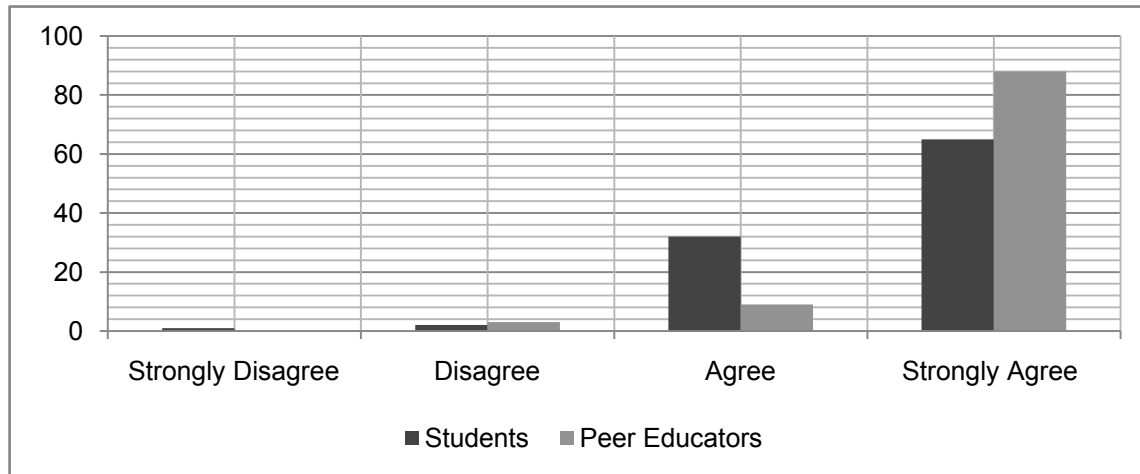


Figure 30 shows that 72.2% of students, compared to 73,7% of peer educators strongly disagree or disagree that people who practice sexual acts like unprotected anal sex deserve the right to get HIV. This shows a positive attitude and practice towards people who practice acts like anal sex.

27.84% of students as compared to 26.26% of peer educators strongly agreed or agreed, and responded with a different opinion from their peers in that people who practice acts like anal sex deserve the right to get HIV. A total of 10.18% of students and 1.00% of peer educators didn't respond to this question.

Figure 31: Tshwane University of Technology should continue providing condoms.



The findings regarding condoms distribution by TUT in Figure 31 reveals that 96.9% of students as compared to 97% of peer educators strongly agreed or agreed on this issue that condoms should be distributed on campus as a prevention measure. This finding reveals a high percentage of condom distribution agreement from both students and peer educators, that condom can prevent transmission of HIV and STI's. The remainder of our participants 3.10% of students as compared to 3.00% of peer educators strongly disagreed or disagreed. 10.20% of students didn't respond to this question.

Figure 32: Students who believe in having multiple-concurrent partners

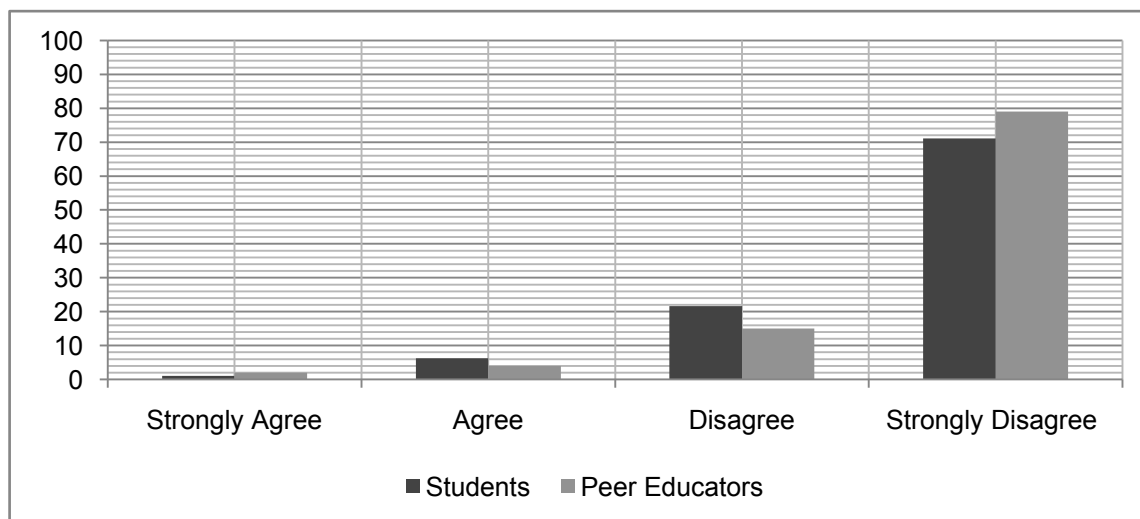


Figure 32 shows that 92.8% of students, compared to 94% of peer educators strongly disagree or disagree in having multiple concurrent partners as this practice can put one at risk of contracting HIV. This shows a positive attitude and practice towards healthy lifestyle. Multiple concurrent partners are defined as having more than one sexual partner at the same time. This practice has been identified as one of the drivers of HIV, especially when protection is not used.

7.2% of students as compared to 6% of peer educators strongly agreed or agreed, they responded with a different opinion from other peers that they believed in many sexual partners. A total of 10.2% of students didn't respond to this question.

Figure 33: What influenced you to become a peer educator?

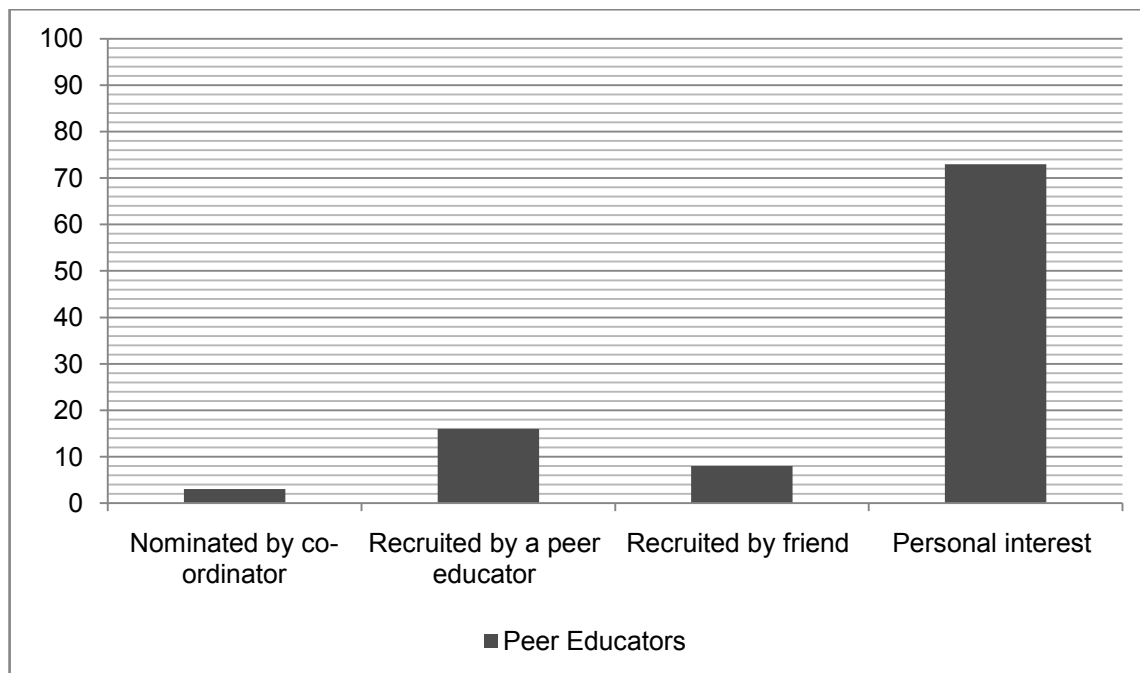


Figure 33 indicate that 73% of the respondents became peer educators due to personal interest, followed by those who (16%) were recruited by other peer educators who were already in the system, 8% were recruited by a friend, and lastly 3% was nominated by a co-ordinator.

Figure 34: I have been trained on HIV/AIDS

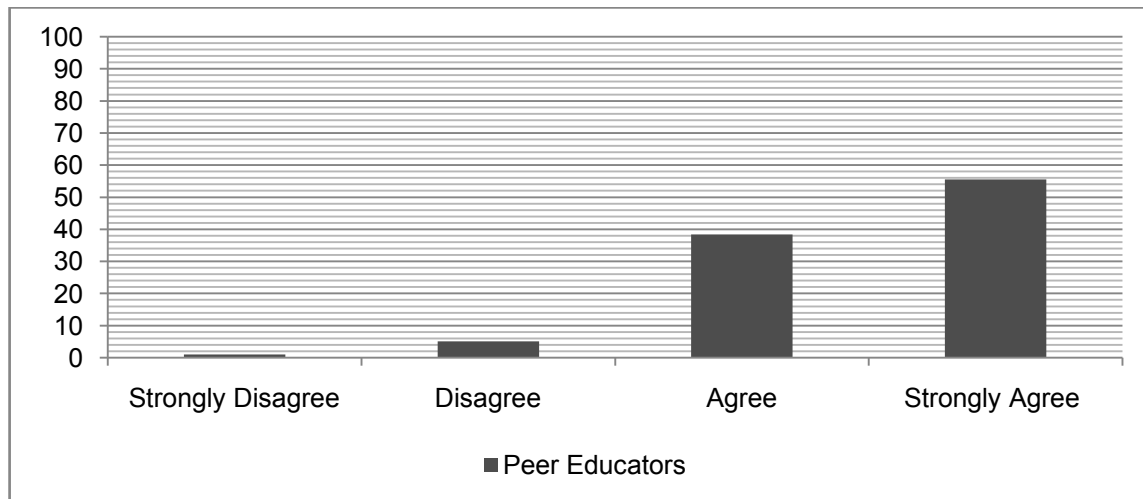


Figure 34 indicate that 93.9% of the respondents became peer educators and were trained on basic HIV module, lastly 6.1% responded by saying that they were not trained. 1% did not respond to this question.

Figure 35: Year in which peer educators were you trained.

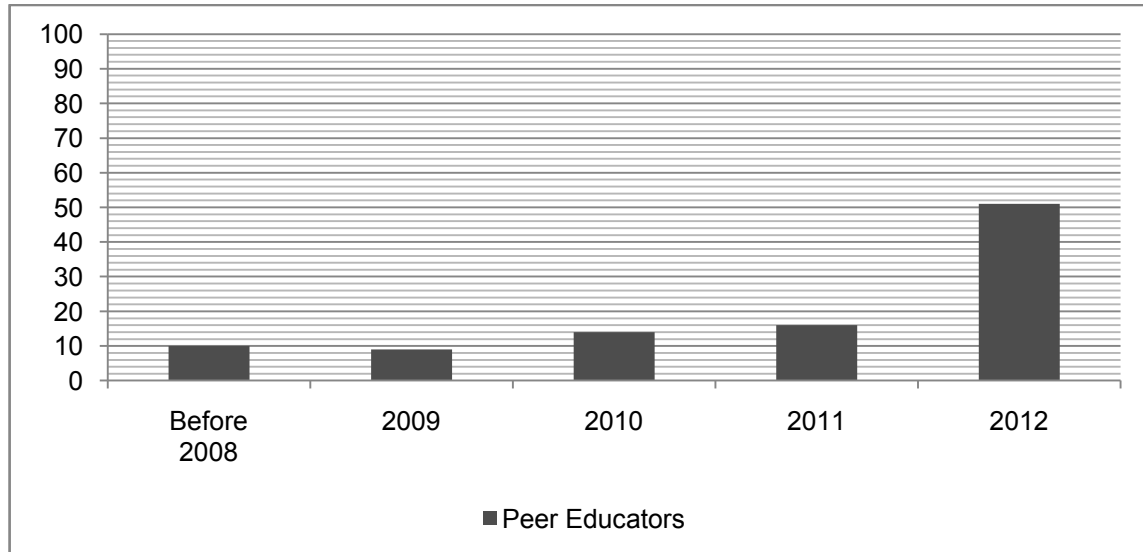


Figure 35 indicate that 10% of the respondents became peer educators and were trained on basic HIV module before 2008, 9% were trained in 2009, 14% were trained in 2010, 16% were trained in 2011 and lastly the majority of peer educators (50%) were trained in 2012.

4.6 KEY ISSUES THAT PEER EDUCATORS WERE TRAINED ON

Data from open-ended questions indicate the following:

Knowledge - basic HIV/AIDS, STI'S & TB, basics on counselling, life cycle of the HIV, ethics, values, importance of team building, peer education, project and time management.

Attitudes - positive living, stigma and discrimination towards HIV/AIDS and PLWA's also ARV's.

Practices - condom (male and female) demonstration, importance of testing (HCT), nutrition, transmission, prevention & protection, healthy lifestyle, safe and safer sex concepts.

Figure 36: Respondents who still need training on HIV/AIDS.

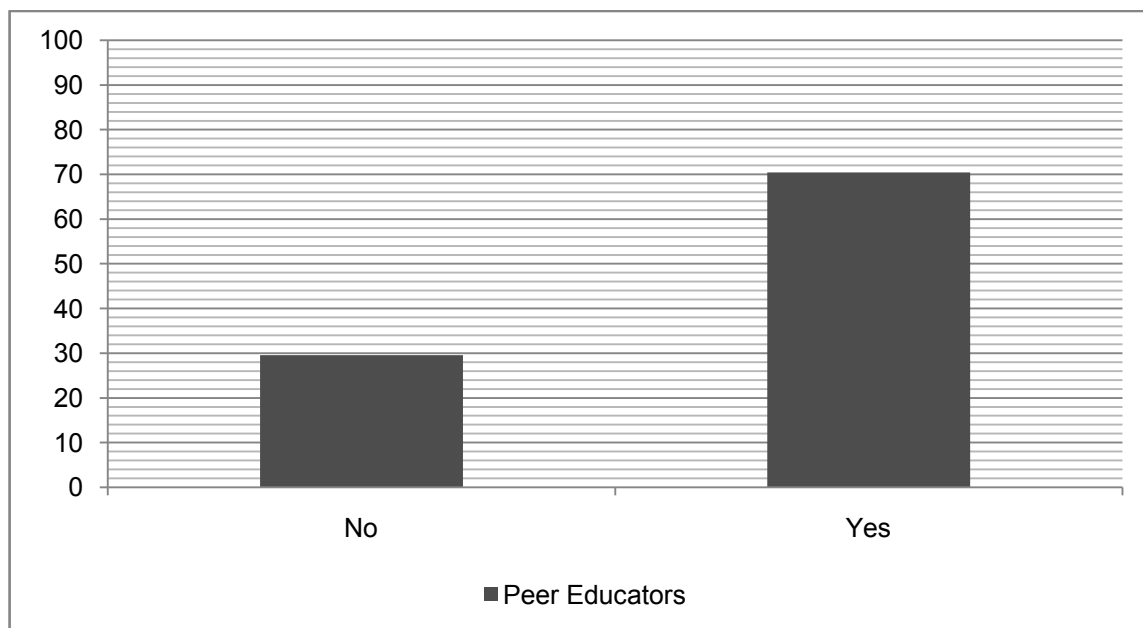


Figure 36 shows that 70.4% of the participants, being peer educators, had an interest in being trained on HIV/AIDS and 29.60% said they don't need training.

4.7 AREAS OF HIV/AIDS WHERE PEER EDUCATORS NEED TRAINING:

Data from open-ended questions indicate the following:

Knowledge – more information on “One Love” issues with Soul City, further training on HIV; HIV treatment and more information on nutrition.

Attitudes - relationship with someone who is HIV positive, strategies to combat stigma, caring and support for PLWA's and how to motivate students.

Practices - role modelling, prevention strategies i.e. condom campaigns.

4.8 TYPE OF CHALLENGES EXPERIENCED BY PEER EDUCATORS:

Data from open-ended questions indicate the following:

Knowledge - Lack of intercampus interaction with other peer educators in order to share information

Attitude - Ignorance & bad attitude of students, discrimination /disrespect/ judgemental and lack of co-operation from students and personal problems were some of the key aspects that were raised.

Practices - High rate of pregnancy, stage fright, and rejection from other students played a key role as being the challenges.

Figure 37: If you happen to test HIV positive, would you still be prepared to continue with Peer Education?

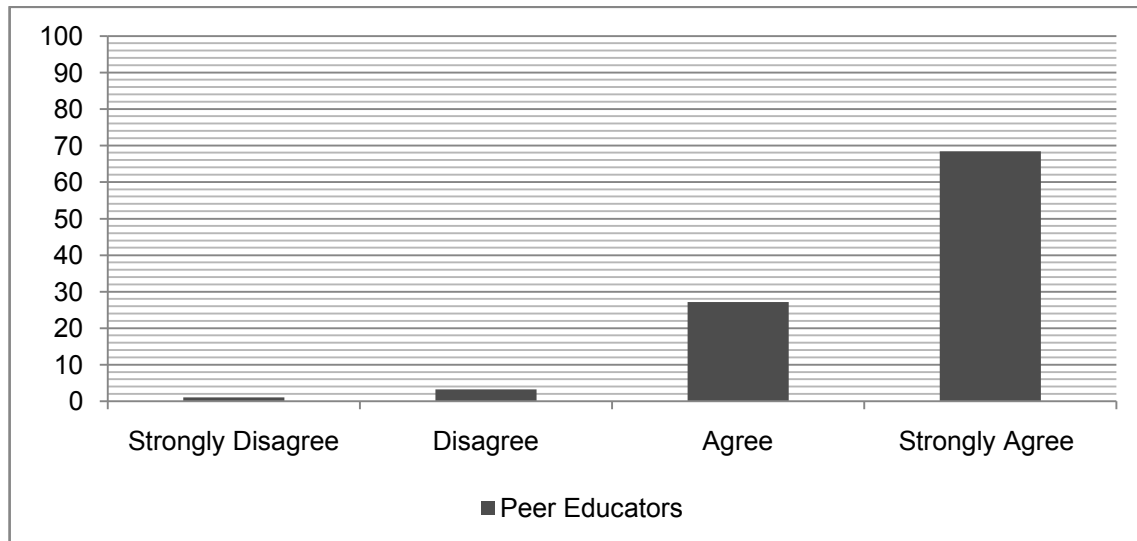


Figure 37 demonstrates the percentages of those participants who, even tested positive, would still be willing to continue with peer education: 95.7% strongly agreed and agreed, 4.4% did not agree, and 8% did not respond.

These figures imply that the majority of the respondents would still continue to serve as peer educators, even if they would test HIV positive.

CHAPTER 5: DISCUSSION

5.1 INTRODUCTION

This chapter presents the findings of the current study conducted at Tshwane University of Technology. The discussion will be based on:

- Objectives of the study relative to the literature review.
- The knowledge/education gaps between peer educators and students and
- Recommend where necessary based on the outcomes of the study

5.2 DISCUSSION

5.2.1 Knowledge on HIV/AIDS among Peer Educators and Students

The study assessed the level of knowledge regarding HIV/AIDS among the two groups by directing seven questions related to the subject. The researcher wishes to point out that, the respondents are tertiary institution students, and their academic level should assist in making sound healthy decisions. Considering the basic questions that were asked especially of peer educators who were trained on HIV/AIDS, one would expect their scores to be high.

Three quarters of respondents in this study were female. This is consistent with many other studies, conducted on HIV/AIDS among students. The response rate in this study was 68% and was higher than the 45% of the Namibian Polytechnic students who participated in the KAP surveys of HIV/AIDS (De Beer et al., 2012).

Respondents in this study displayed a high HIV knowledge level of above 90% on average. Peer educators yielded a mean level of 92.43% which was slightly higher than students at 89.52%. However this was slightly lower than students at the University of Botswana where the mean levels of knowledge were 96% (Stephens et al., 2012) but higher than the findings of Odu et al., (2008) where most of his respondents (89.4%) were aware of the existence of HIV/AIDS, and knew the aetiology routes. Also higher among tertiary education students in Lagos, Nigeria where mean knowledge levels were 83% (Durojaiye, 2011) and 77.3% knowledge levels among students enrolled at a

Midwestern university in the United States (Inungu et al., 2009). An assumption can be made that there is a positive contamination of filtering of information from peer educators to students, even other sources that our students consulted for their own benefit. It is interesting and encouraging to note the exceptionally high levels of knowledge among both groups in differentiating between HIV and AIDS and its modes of transmission. Some students in the study (13.09%) still have the belief that mosquitoes transmit HIV. Inungu, et al., (2009) reported a 14.2% on the same issue.

Regarding knowledge on HIV cure, a high percentage scoring was observed: 87.04% students and 92% peer educators still maintain that there is no cure for HIV. This translates into a deduction that, since most of our respondent know that a vaccine is not available, the only available treatment is for the management of HIV, through ARV's. This indicates high levels of knowledge and competencies regarding the treatment of people living with HIV, which is lower than the findings of Aggarwal et al., (2007) who reported that 10% of dental students and 40% of nursing students are of the opinion that a cure is available for AIDS. Of concern are the 8% peer educators who responded that there is a cure for AIDS. HIV training needs to be accelerated towards them, so that they should share the correct information with their peers.

The issue of HIV/AIDS as a private matter is of concern on the students' side, as they scored 78.7%. How can campuses reduce HIV infections and promote health and well being of students, if we don't talk about HIV matters? Hence awareness campaigns and talk shows need to be encouraged in promotion of HIV reduction.

Durojaiye (2011) reported high levels of knowledge of HIV/AIDS, in his study however, risk perceptions are low with high risk sexual behaviour. It is concerning that the minority of participants in the study, 2.78% of students as compared to 3% of peer educators strongly agreed or agreed and maintained that having sexual intercourse with a virgin can cure AIDS. This myth will have negative implications in the fight against HIV/AIDS, and hence training and sharing of correct information is required to enhance their cognitive levels. There are certain beliefs in the form of cultural taboos and practices that help aggravate the spread of HIV/AIDS in Botswana. Men who have been very ill for lengthy periods may be advised by traditional doctors to sleep with a virgin (Odirile, 2000). Hence throughout literature, lack of education and misinformation has been

linked to low knowledge levels, negative attitudes, and existing misconceptions regarding HIV/AIDS (Fraim, 2012).

These findings revealed that the students and peer educators as respondents had high levels of knowledge of HIV/AIDS and scored over 90%, which is in line with the findings of Stephens et al. (2012) with 96% scoring from his respondents, also consistent with Melkote and Goswami (2000) who provided high scores on knowledge HIV/AIDS and modes transmission in their study. A conclusion can be made that high levels of knowledge contribute to low risky sexual behaviour (Gritzinger, 2006).

5.2.2 Attitudes towards HIV/AIDS among Peer Educators and Students

This section presents the insights of the respondents regarding their attitudes; an attitude towards HIV can either be positive or negative. The researcher wishes to point out that both the respondents, students and peer educators, have displayed a positive attitude towards HIV/AIDS. However, small pockets of negative responses were observed, as nine questions were used to tap into their insights regarding attitudes on HIV/AIDS. High levels of positive attitude were displayed by peer educators with an average score of 85% vs. the students who yielded an average score of 77.41%. The findings on attitudes of this study is in contrast with the study conducted by Fraim (2012) where he reported low knowledge levels, negative attitudes and existing misconceptions regarding HIV/AIDS.

Therefore there is a significant difference between students and peer educators with respect to attitudes; the researcher needs to state that peer educators have attended peer education-HIV/AIDS prevention programme training and an opinion can be drawn that this may have contributed immensely towards their attitudes. The training issue is in line with the study conducted by Kirby et al., (1997), who reported a significant increase in HIV/AIDS knowledge from a curriculum intervention and similar findings of Stiernborg et al., (1996), where experiential learning or didactic teaching of HIV/AIDS led to significant knowledge levels and attitudes. This was further argued by Kent et al., (2005) in their comparative study. They found that students who participated in the HIV workshop showed positive changes in their attitudes and skills regarding HIV, as compared to those who didn't participate.

The majority of the respondents, 66.6% of students vs. 78.0% of peer educators, indicated that they did know someone who was living with HIV/AIDS. This indicates that most students know someone, as HIV has its tentacles in communities. Opt & Loffredo, (2004) in their study reported a lower percentage, about 26%, of the students who knew someone with AIDS, someone who had died from AIDS, or someone who tested positive for HIV. The study respondents' spectrum ranged from knowing their peers, friends, family members, neighbours, community members and others as seen in Figure 9. Opt & Loffredo (2004) further argues that students' acquaintance with HIV/AIDS-infected people appear to increase as they move from high school to college. Whilst 33.34% students vs. 22% peer educators responded that they do not know anyone who lives with HIV. Opt & Loffredo (2004) reported 45% of those not knowing someone with HIV/AIDS in his study which is higher than the current survey findings. In conclusion, Opt & Loffredo (2004) further cites that in addition, respondents who reported knowing someone with HIV/AIDS were slightly more likely to be very or somewhat concerned personally about becoming infected.

There is a significant difference in percentages of the study respondents in terms of modes of transmission, this has been shown by 74.5% of students, vs. 97% of peer educators who strongly disagree or disagree that there is a high risk of being infected when sharing a desk with a person who is HIV infected. This is a positive attitude towards PLWA's. The majority of the respondents showed a positive attitude and were empathic towards children living with a HIV. This is in contrast with the study by Brook (1993) where he studied AIDS related-knowledge and attitudes among high school students in Holon, Israel, and found that 19% of the pupils were of the opinion that students diagnosed as HIV positive should not be allowed to continue their regular studies as they can endanger their fellow students, as cited by (Serlo & Aavarianne, 1999).

The response to this very sensitive and emotional question (Disclosure of HIV status) was with mixed feelings; some respondents were in a position to disclose 46.30% of students vs. 56% of peer educators, others not in a position to disclose their status 53.70% of students vs. 44.00% of peer educators. We observe that the lack of HIV/AIDS education has an effect, in that there is fear of stigma and discrimination, even rejection for those who strongly disagreed or disagreed on going public with their status. This

issue of stigma and discrimination manifested itself in various areas as the respondents varied from friends, fellow students/colleagues, sexual partners, family members, counsellors and others, to whom they won't disclose their status. Canadian Strategy on HIV/AIDS (2002) states that people stigmatizes an individual who has been or suspected of having HIV/AIDS, primarily because of fear of the disease. They pronounce the person 'guilty' of acquiring the infection and deserving of his/her fate.

The majority of the survey respondents on the issue of caring of PLWA's, overwhelmingly came from the peer educators (83%) vs. (67.6%) of students. This showed element of maturity and positive attitude in caring for people living with HIV from peer educators as there is a significant difference in percentage between the cohorts. This is the same sentiment of Serlo & Aavarianne. (1999) in their study; most of the students had positive attitudes. There were such positive opinions expressed as "those who have HIV/AIDS have equal rights to get cured as the others". However the current study reported a higher percentage than the findings of Mureed (2008) who reported a 79.9% of students were willing to live with an infected person in their family, but quite lower percentage than the findings of a study done by Al-Rabeei, Dallak and Al Awadi (2012) at the health institute in Sana'a city, Yemen, where (86.8%) of their respondents were willing to take care of an HIV-infected person. A negative picture was painted by the high figures reported by the study of Ni and Htet (2012) at University of Malaysia, where the majority of the respondents (83.2%) had no sympathy towards HIV positive persons. However, the study of Melkote and Goswami (2000) paints a way forward in that it shows the importance of health communication/education campaigns in bringing about a positive change of opinion towards people living with HIV/AIDS by influencing the attitude and knowledge of AIDS variables.

The majority of the respondents in this study knew that it is not the responsibility of women alone to reduce HIV infection but all of us, according to the response of the participants in Figure 15 that shows 94.44% of students as compared to 99% of peer educators. There is a high competency level of HIV prevention in the respondents. The understanding of HIV/AIDS issues shows that our respondents know that HIV knows no color, race and gender. This was shown by the response of majority of respondents with respect to this issue, 97.22% of students, compared to 99.00% of peer educators.

An assumption can be made that the one love concept-(talk, respect and protect) adopted from Soul City is filtering to our students in terms of minimizing the risk of being infected with HIV, as majority of respondents 89.81% of students vs. 90% of peer educators view the practice of multiple concurrent partner (MCP) as a high risk in terms of HIV infection. The study of Ni and Htet (2012) at University of Malaysia reported a lower figure of 86.5% of sex with changing partner/s.

5.2.3 Practices regarding HIV/AIDS among Peer Educators and Students

This section presents the discussion on practices of both the respondents. We observed risky practices in students and low ones in peer educators. Eleven questions were used to tap into their insights on practices regarding HIV/AIDS. Average practice scores for the respondents were as follows 89.73% of peer educators vs. 80.89% of students respectively; a higher percentage on the peer educators' side was observed. Therefore there is a significant difference between students and peer educators with respect to practice on HIV/AIDS.

We note that 84% of peer educators vs. 73.19% of students view HCT as a starting point of a healthy life style, as they have a positive attitude in knowing their status. This is substantiated by the fact that the majority of both groups of the respondents have been tested in one way or the other, irrespective of time, This finding is in contrast with the studies that were conducted by Stephen et al., (2012) at the University of Botswana (56%) and De Beer et al., at polytechnic of Namibia and the University of Namibia who reported lower numbers for HCT, despite the respondents having excellent knowledge of HIV.

In a study that was conducted by Opt et al., (2007) among non-traditional and traditional students, they reported a lower percentage of HIV testing-that is 64.3% vs. 54.3% respectively. A lower number, 32% and 29.4% was reported by Othero, Aduma, Opil (2009) and Inungu et al., (2009) of students who reported having undergone HIV tests, respectively. In their study, Inungu et al., (2009) concluded that coexistence among college students of both misconceptions about the mode of HIV/AIDS transmission and denial about their vulnerability to contract this disease underscores the need for a proactive approach to address these challenges facing our youth. And knowledge of HIV

status is important in efforts to mitigate the effects of the disease, hence the interest in testing and diagnosis. (Karim & Karim, 2010).

92.87% of students vs. 96% of peer educators strongly agreed or agreed in that they will participate in a HCT [HIV Counseling and Testing] and also agreed that it is proper for the University to conduct HCT. Othero, Aduma, Opil (2009) reported a lower number (70.8%) of his subjects who were willing to go for an HIV test. Finally it is interesting to note that 25.77% of students vs. 10% of peer educators have never gone for HCT, which is a lower percentage than the sample of Opt & Loffredo (2004) who reported a majority of (54.3%) respondents who said they had not been tested for HIV.

Approximately 69.10% of students vs. 87% of peer educators have had a condom demonstration before and more peer educators (87%) vs. students (75%) said they always used a condom when having sex. This was comparable to a **lower** 77.7% of university students who affirmed having ever used condoms (Othero, Aduma, Opil, 2009) also of sexually active respondents. 75.9% claimed to have used condoms in the study by Odu et al., (2008) and 72.8% reported condom use among undergraduate students at Jomo Kenyatta University of Agriculture and Technology in Kenya (Nesidai, Ng'ang'a, Mwangi and Wanzala, 2011); but higher than 66% reported condom use among students at the University of Botswana (Stephens et al., 2012) and only 56.8% of medical students of University Malaysia Sabah who agreed to condom usage with every sexual encounter. The study further found out that majority of respondents 57.73% of students vs. 62% of peer educators; will use protection consistently, irrespective of circumstances. This shows caring for others, as the majority of students and peer educators have shown through the study, while others have conditions attached. And they further agreed that TUT should continue to provide condoms for protection on campus.

It is a bit worrying to note that condom utilization is low by students when it comes to sexual engagement; this exposes them to risks of contracting HIV, also STI's. The results could be dire. The majority of the respondents were of the opinion that condoms, if properly used can prevent the transmission of HIV (92.78% students and 88% of peer educators). This is in line with Ni and Htet, (2012). Their study presented an interesting

finding in that 94.2% of their respondents had knowledge that HIV infection can be prevented by condom usage which is higher than our findings.

25% of students vs. 13% of peer educators who strongly disagreed or disagreed with condom use, there could be other reasons. This area was not explored, of not being sexually active. However Hein (1999) argues that non-use or inconsistent use of condom, this behaviour potentially place heterosexual young people at risk of HIV infection as cited by (Akande, 2001). This was also reported by Maimaiti et al., (2010) in their study at Xinjiang University (XU) and Xinjiang Medical University (XMU). They found that with regards to high risk behaviour associated with HIV transmission. 15.8% of these students had at least one risk behaviour, related to unprotected sexual exposure.

Both 80.4% of students vs. 93.0% of peer educators agree that acts like anal sex are high risks acts where protection should be used. Ni and Htet, (2002) respondents reported a lower figure (78.7%) disapproval of anal sex. Empathy was shown to people who practice sexual acts like unprotected anal sex. Respondents who showed this feeling were in the majority. This is argued by Madlala, (1997) as cited by (Akande, 2001) that despite the great majority of sexually active South African youth being aware of the dangers of HIV infection from unprotected anal intercourse, a large proportion may still place themselves at risk. And lastly MCP was seen as one of the drivers of HIV, especially when protection is not used

5.2.4 Knowledge gaps identified

The study does reveal some knowledge gaps between peer educators and students.

- Awareness and knowledge of HIV/AIDS is high among peer educators and students at Tshwane University of Technology. The majority of students are aware of HIV pandemic, however, literature informs us that this trend is unusual. The same results were found in the study of Ebeniro (2010). Even though knowledge is high, an area of concern is the knowledge gap of (93% peer educators vs. 86% students) that one can be infected from mosquito bite. Also on the 85% peer educators vs. 78.7% students on HIV as a private matter. In general, peer educators had more knowledge about HIV/AIDS than students.

- More positive attitudes were observed from peer educators than students. 97% peer educators vs. 74.52% students were positive and accepting people living with HIV and 83% peer educators vs. 67.59% students were able to take care of a person dying of AIDS related disease. 56% peer educators vs. 46.30% students indicated that they are in a position to disclose their status, and 84% peer educators vs. 68.52% students are comfortable with condoms.
- More peer educators showed positive practices than students (84% vs. 73.14%) and (96% vs. 92.8%) on knowing ones status and on participation in HCT, respectively. Also 87% vs. 75% on condom utilization. Further demonstration was on prevention and transmission mode with 93% peer educators vs. 80.41% students.

In conclusion peer educators demonstrated better attitude and practices as compared to students even though their knowledge levels were almost the same.

5.2.5 LIMITATIONS

Although considerable care was taken in designing the KAP questionnaire to avoid ambiguity, the quality of the responses to a number of questions was highly dependent on the knowledge of the respondents. Clear instructions were given in the survey form when to prompt and when to probe for answers; nevertheless it is expected that some mistakes might have happened in the field.

The findings of this study should be interpreted with caution. Although there was a decent response rate of 68%, the sample of 208 was relatively small compared to the total population of 49,289 students, and too many female respondents. It is therefore difficult to generalize on the findings of this study to all universities in South Africa.

Other limitations are that a lot of questionnaires were not returned, there were time constraints in probing different variables and the exhaustive nature of the study.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The study presented an opportunity to assess the knowledge, attitude and practices of the students and peer educators.

The findings of this study at Tshwane University of Technology revealed that there was adequate knowledge of HIV/AIDS in terms of the ways of transmission and prevention of the HIV infection, between the students and peer educators, with a low significant difference between the two groups. It is quite interesting to note that the mean knowledge levels of the respondents were comparable to their cohorts in other studies conducted. As the respondents displayed an average score of above 90% (peer educators 92.43% vs. students 89.52%), this was comparable to mean levels of knowledge of 96% of university of Botswana (Stephen et al., 2012).

High percentage scoring was also observed on HIV cure, (87.04% students and 92% peer educators). However, a misconception and a risk perception was observed where 2.78% of students as compared to 3% of peer educators strongly agreed or agreed and maintained that having sexual intercourse with a virgin can cure AIDS.

Thus the dissemination of information through HIV training programme needs to be strengthened in order to attain even higher levels of knowledge especially on students.

Significant differences were observed in the attitudes of the students, and the peer educators were of low risks as compared to students. High levels of positive attitude were displayed by peer educators with an average score of 85% vs. the students who yielded an average score of 77.41%.

These differences could be attributed to peer education-HIV/AIDS prevention programme training and an opinion can be drawn that this may have contributed immensely towards their attitudes. Though there are areas that need to be addressed for example the issue of having sex with the virgin can cure AIDS myth, with both the peer educators and students.

Much as there were positive attitudes on the side of the peer educators, which translated into low risk group, a conclusion can be drawn that the peer education programme has shown to be effective in improving peer educator's attitudes and practices (Shen et al., 2008; Huang et al., 2008). There is room for improvement on the students' side on the attitude issues, with implementation of basic HIV/AIDS training, that will enhance their knowledge, and minimize the health risks associated with HIV/AIDS. Price and Knibbs, (2009) cites that the idea of engaging young people in sexual and reproductive health interventions in a way that increases their autonomy and capacity remains attractive, while the increasing incidence of HIV among young people makes finding ways to mitigate their vulnerability a priority.

The findings of this study presents, an average practice scores for the respondents were as follows 89.7% of peer educators vs. 80.9% of students respectively; a higher percentage scores on the peer educators' side was observed. Therefore there is a significant difference between students and peer educators with respect to practice on HIV/AIDS, these findings are in line with that of (Opt et al., 2007) and (Ni and Htet, 2012).

Positive practices were noted on the side of the peer educators, which translated into low risk group. A conclusion can be drawn that the peer education programme has shown to be effective in improving peer educator's attitudes and practices (Shen et al., 2008; Huang et al., 2008).

Finally the study presented an overview of the students and peer educators with regards to HIV. It is evident from the results that the peer educators engage in low risk activities as compared to students; this shows the importance and the impact of peer education programme. Furthermore, this study creates an opportunity for further research with a larger population of both students and peer educators, at all Tshwane University of Technology campuses.

6.2. RECOMMENDATIONS

The following recommendations are presented, based on the findings of this study

A standardized training is recommended for peer educators based on the findings of the study with inconsistent responses from them, as they play a critical role on campus being the agents of change in HIV/AIDS education.

An introductory peer led training workshop on HIV/AIDS for first year students is recommended as it will mitigate and assist our first year student to be competent on HIV/AIDS related matters.

More funding from the institution or even sponsorships will assist the peer education program in terms of developing peer educators to be more competent, in research on campus, in stimulating educational approach to HIV/AIDS, awareness campaigns and execution of health promotion projects in combating the epidemic.

Develop objective guidelines for selecting peer educators; in ensuring that the right peer educators are selected and can withstand the student's challenges on campus and enhancing and promoting the peer education, so that peer educators are well prepared and supported in their efforts of combating HIV/AIDS.

Involvement of PLHIV in the programme as to serve as role models; and to take a leading role, with projects like open social clubs.

7. REFERENCES

Adamchak, S.E. 2006. Youth peer education in reproductive health and HIV/AIDS: Progress, process, and programming for the future. Youth Issues Paper 7. Family Health International, Youth Net Program.

African Development Forum. 2000. The leadership challenge and the way forward: HIV/AIDS and education in Eastern and Southern Africa. http://library.unesco-icba.org/English/HIV_AIDS/cdrom%20materials/Africa [Accessed 17 March 2012]

Aggarwal, A., Sheikh, S., Pallagatti, S., Bansal, N. & Goyal, G. 2012. Comparison of knowledge, attitudes and behaviour of dental and nursing students towards HIV/AIDS. Journal of Medicine and Medical Sciences Vol. 3(8) pp. 537-545.

Agha, S. & van Rossem, R. 2004. Impact of a school based peer sexual health intervention on normative beliefs, risk perceptions, and sexual behaviour of Zambian adolescents. Journal of Adolescent Health 34 (5): 441-452.

Akande, A. 2001. Risky Business: South African youths and HIV/AIDS prevention, Educational Studies, 27:3, 237-256

Al-Rabeei, N.A., Dallak, A.M. & Al-Awadi, F.G. 2012. Knowledge, attitudes and beliefs towards HIV/AIDS among students of health institutes in Sana'a city. Eastern Mediterranean Health Journal, 18; 3: 221-226.

Anderson, B. 2000. Anger management through peer education: a new approach. A paper presented at NACRO Youth 2000 Conference. <http://www.freespace.virgin.net/new.leaf/pageF.html> [Accessed 19 July 2012]

Armenian medical network" <http://www.health.am/eng/aids/index.php> [Accessed 9 February 2012]

Barnes, T. 2000. The impact of HIV/AIDS on the University of the Western Cape. South Africa. ADEA.

Barnes, T. 2007. Understanding HIV/AIDS. <http://www.schoolhealthservices.org/hiv-aids.cfm?subpage=49> [Accessed 16 February 2012]

Barret-Grant, K., Fine, D., Heywood, M. & Strode, A. 2001. HIV/AIDS and the law: A resource manual. The AIDS Law Project and the AIDS legal Network.

Bloom, E., Mahal, A. & River Paths Associates. 2002. HIV/AIDS in the private sector: A literature review. The Joint United Nations Programme on HIV/AIDS [UNAIDS]

Brook, U. 1999. AIDS-related knowledge and attitude of high school students in Holon, Israel. *Journal of Tropical Paediatrics* 39(6),382-384.

Canadian Strategy on HIV/AIDS. September/October 2002. Stigma and discrimination greatest barriers to preventing more infections.
http://www.aidsida.cpha.ca/english/about_e/prevplus/2002/prevpl14.pdf [Accessed 1 April 2007]

CDC.HIV/AIDS Surveillance Report.2004. Atlanta, GA: US Dept of Health and Human Services. Available at [URL:http://www.cdc.gov/hiv/stats/harslink.htm](http://www.cdc.gov/hiv/stats/harslink.htm).

CDC.HIV/AIDS and colleague students.1995. Available at
[URL:http://www.cdc.gov/hiv/resources/factsheets/transmission.htm](http://www.cdc.gov/hiv/resources/factsheets/transmission.htm).

Cok, F., Gray, L.A. & Ersever, H. 2001. Turkish university students' sexual Behaviour, knowledge, attitudes and perceptions of risk related to HIV/AIDS. *Culture, Health & Sexuality*, 3 (1), 81-99.

Cornish, F. & Campbell, C. 2009. The social conditions for successful peer education: Comparisons of two HIV prevention programs run by sex workers in India and South Africa. *American Journal of Community Psychology* 44(1-2): 123-135.

Cullinan, K. 2012. Cape Times., HIV policy changes praised. 30 November 2012. Page 9, Health e-News Service.

Davis, C., Sloan, M., MacMaster, S. & Kilbourne, B. 2007. HIV/AIDS knowledge and sexual activity: An examination of racial differences in a college sample. *Health and Social Work*, 32 (3), 211-8.

De Beer, I.H., Gelderblom, H.C., Schellekens, O., Gaeb, E., van Rooy, G., McNally, A., Wit, F.W., de Wit, R. & Tobias, F. 2012. University students and HIV in Namibia: An HIV prevalence survey and a knowledge and attitude survey. *Journal of the International AIDS Society* 2012, 15:9: 15-19

Deutsch, C. & Swartz, S. 2002. *Rutanang: A peer-education implementation guide for higher education in South Africa*. Pretoria, South Africa: Department of Health; 2002.

Durojaiye, O.C. 2011. Knowledge, attitude and practice of HIV/AIDS: Behaviour change among tertiary education students in Lagos, Nigeria. *Ann Trop Med Public Health*; 4:18-24.

Ebeniro, C.D. 2010. Knowledge and beliefs about HIV/AIDS among male and female students at Nigerian universities. *Journal of Comparative Research in Anthropology and Sociology*, 1 (1): 121-131

Evian, C. 2002. *Primary AIDS Care. A practical guide for primary health care personnel in the clinical and supportive care of people with HIV/AIDS*. Jacana Education: Johannesburg, South Africa.

Fennel, R.1993. A review of evaluations of peer education programs. *Name of journal?* 41(6):251-253.

Ford, N. & Inman, M. 1992. Safer sex in tourist resorts. *World Health Forum*: 13: 77-80.

Fraim, N.L. 2012. Knowledge Levels and Misconceptions about HIV/AIDS: What do University Students in Turkey Really Know? *International Journal of Humanities and Social Science*, 2 (12) Special Issue: 50-58.

Gange, G., Kanepaja-Vanag, E. & Upenieks, R. 2003. *Handbook for peer educators HIV/AIDS and reproductive health*. UNDP: Ministry of Education and Science.

Gould, J.M. & Lomax, A.R. 1993. The evolution of peer education: Where do we go from here? *J Am Coll Health*. 41(6):235-240.

Gray, L.A., Devadas, R.P., Vijayalakshmi, O., & Kamalanathan, G. 1999. Knowledge, attitudes and beliefs about HIV/AIDS among Hindu students from a government women's college of South India. *International Journal for the Advancement of Counselling*, 21, 207–219.

Grotzinger, E. 2006. Employee knowledge, attitude and practises relating to HIV/AIDS at a mining company in Namibia. Unpublished dissertation. University of Western Cape.

Higher Education AIDS Programme. 2006. Strategic Framework. 2006 – 2009 and beyond. HEAIDS: Pretoria.

Huang, H., Ye, Y. Cai, L. Shen, G. Xu, R. Shi, and X. Jin. 2008. "Study on Peer-Led School-Based HIV/AIDS Prevention among Youths in a Medium-Sized City in China" *International Journal of STD & AIDS* 19 (5); 342-346.

Ibe, S.N. 2005. HIV/AIDS awareness study of fresh students in tertiary institutions in the Rivers State of Nigeria. *Journal of Applied Environmental Management* 9 (1): 11-13.

Inungu, J., Mumford, V., Younis, M. & Langford, S. 2009. HIV knowledge, attitudes and practices among college students in the United States. *J Health Human Services Administration*; 32(3): 259-77.

Jin, H. & Williams, W. 2003. The relationship between knowledge and attitude about HIV/AIDS among university students' in Changsha. *Practical Preventive Medicine*, 2003, 04

Kamaldien, Y. 2009. A study on knowledge, attitudes and practices (KAP) on HIV/AIDS amongst the employees of Telkom SA Ltd. Unpublished research report, University of Stellenbosch.

Karim, S.S. & Karim, Q.A. 2010. HIV/AIDS in South Africa 2nd edition. Cambridge University Press. Cape Town. South Africa

Kelly, M. 2000. Planning for Education in the Context of AIDS, draft, Fundamentals of Education Planning Series, IIEP/UNESCO Paris.

Kent, A., Myer, L. Flisher A.J, Matthews, C. & Lombard, C. 2005. Introducing HIV/AIDS to South African health sciences students. *Medical Teacher* 27, (7): 647-649

Kinzey, R.E.1999. Using public relations strategies to promote your non-profit organization. New York, NY: Haworth Press.

Kirby, D., Korpi, M., Adivi, C. & Weissman, J. 1997. An impact evaluation of project SNAPP: an AIDS and Pregnancy Prevention middle-school program. *AIDS Education and Prevention*, 9 (Suppl):44-61.

Lal, S.S., Vasan, R.S., Sankara-Sarma, P. & Thankppan, K.R. 2000. Knowledge and attitude of college students in Kerala towards HIV/AIDS, sexuality transmitted diseases and sexuality. *The National Medical Journal of India*. Vol.13, No.5.

Lezin, N. 2007. Theories and approaches. With a little help from friends: Peer education teen pregnancy prevention

<http://www.etr.org/recap/theories/peereducation/index.html> [Accessed 9July 2012]

Li, X., Lin, C., Gao, Z., Stanton, B., Fang, X., Yin, Q. & Wu, Y. 2004. HIV/AIDS knowledge and the implications for health promotion programs among Chinese college students: Geographic, gender and age differences. *Health Promotion International*, 19, (3): 345-356.

Macphail, C. & Campbell, C. 2002. Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African Youth. *Social Science & Medicine*. Vol.55. Issue 2, July 2202. Pp 331-345

Madlala, L.S. 1997. Infect one, infect all: Zulu youth response to the AIDS epidemic in South Africa, *Medical Anthropology*, 17, pp. 363-380

Maimaiti, N., Shamsuddin, K., Abdurahim, A., Tohti, N. & Memet, R. 2010. Knowledge, attitude and practice regarding HIV/AIDS among university students in Xinjiang. *Global Journal of Health Science* 2, 2; 51-60

Mansoor, AB., Fungladda, W., Kaewkungwal, J. & Wongwit, W. 2008. Gender differences in KAP related to HIV/AIDS among freshmen in Afghan universities. The Southeast Asian Journal of Tropical Medicine and Public Health. 39(3): 404-18

Mason-Jones, A.J., Flisher, A.J. & Mathews, C. 2011. Who are peer educators? HIV Prevention in South Africa school. Health Education Research, Vol. 26. No. 3, 563-571

Maticka-Tyndale, E. 2006. Evidence of youth peer education success, In: Adamchak, S.E. (ed.) Youth peer education in reproductive health and HIV/AIDS. Youth Issues Paper 7. Arlington, V.A: Family Health International (FHI)/Youth Net.

Mattson, M. 2002. Impact of HIV test counseling on college students' sexual beliefs and behaviours. Am J Health Behav. 26:121-136

Melkote, S.R. & Goswami, D. 2000. Predictors of attitudes to persons with AIDS among young adults in India. The Indian Journal of Social Work, 61 (1), 89-105.

Miller, A.N., Mutungi, M., Facchini, E., Barasa, B., Ondieki, W. & Warria, C. 2008. An outcome assessment of an ABC-based HIV peer education intervention among Kenyan University students. Journal of Health Communication: International Perspectives, 13, 4:

National Intelligence Council. 2002. The next wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India, and China. ICA 2002-04D. <http://www.fas.org/irp/nic/hiv-aids.html> [Accessed 15 February 2012]

Nesidai, K.B.A., Ng'ang'a, Z., Mwangi, M. & Wanzala, P. 2011. Knowledge, Attitude and Practice factors associated with condom use among undergraduate Students of a Public University in Kenya (A case of Jomo Kenyatta University of Agriculture and Technology). African Journal of Health Sciences 19: 41-52.

Netting, N. & Burnett, M. 2004. Twenty years of student sexual behavior: sub-cultural adaptations to changing health environment, Adolescence.39:19-39.

Ni, H. & Htet, A. 2012. Knowledge and attitude of HIV/AIDS infection among medical students. *International Journal of Collaborative Research on Internal Medicine & Public Health* 4; 4: 317-326

Norman, L., Carr, R. & Jimenez, J. 2006. Sexual stigma and sympathy: Attitudes toward persons living with HIV in Jamaica. *Culture, Health & Sexuality*. 8: 423–433.

Odu, O.O., Asekun-Olarinmoye, E.O., Bamidele, J.O., Egbewale, B.E., Amusan, O.A. & Olowu, A.O. 2008. Knowledge, attitude and sexual behaviour of students in a tertiary institution in south-western Nigeria. *The European Journal of Contraception and Reproduction Health Care*, 13(1):90-96.

Opt, S.K. & Loffredo, D.A. 2004. College students and HIV/AIDS: More insights on knowledge, testing and sexual practices. *Journal of Psychology*, 138(5): 389-402.

Opt, S.K., Loffredo, D.A., Knowles, L. & Fletcher, C. 2007. College students and HIV/AIDS: A comparison of non-traditional and traditional student perspectives. *Journal of American College of Health*, 56 (2): 165–174.

Osborne, C.M. Van Praeg, E. & Jackson, H. 1997. Models of care for patients with HIV/AIDS. *AIDS* 11 (suppl. B); S135-S141.

Othero, D.M. Aduma, P. & Opil, C.O. 2009. Knowledge, attitudes and sexual practices (KASP) of university students for advancing HIV peer education. *East Afr. Med J.* 86 (1):11-5.

Owens, S. 1995. Attitudes towards knowledge of AIDS among African American Social Work Students. *Health and Social Work*, 20 (2), 110-115.

Perry, C.L., Klepp, K.I., Halper, A., Hawkins, D.G. & Murray, D.M. 1986. A process evaluation study of peer leaders in health education. *J School Health*. 56(2):62-67.

Price, N. & Knibbs, S. 2009. How effective is peer education in addressing young people's sexual and reproductive health needs in developing countries. *Children & Society* 23: 291 – 302.

Qiaoqin, M., Ono-Kihara, M., Cong, L. et al., 2008. Sexual behaviour and awareness of Chinese university students in transition with implied risk of sexually transmitted diseases and HIV infection: A cross-sectional study. *BMC Public Health*.6:232..

QLS. 2005. Personal, Social & Health Education. Why Peer Education. <http://www.sln.org.uk/pshe/dc/PeerEducation.html> [Accessed 9 July 2007].

Rosenthal, W.A, & Khalil, D.D. 2010. Exploring the challenges of implementing Participatory Action Research in the context of HIV and poverty. *Curationis*.33(2):69-78.

Sawyer, R.G., Pinciaro, P. & Bedwell, D. 1997. How peer education changed peer sexuality educators' self-esteem, personal development, and sexual behaviour. *Journal of American College Health*, 45,5: 211-217.

Serlo, K.L. & Aavarinne, H. (1999). Attitudes of University students towards HIV/AIDS. *Journal of Advanced Nursing* 29(2): 463-470.

Shen, L.X., Hong, H., Cai, Y., Jin, X.M. & Shi, R. 2008. Effectiveness of peer education in HIV/STD prevention at different types of Senior High Schools in Shanghai, People's Republic of China. *International Journal of STD & AIDS* 19 (11); 761-767.

Shipalana, P.N. 2009. Knowledge, attitudes and practices on HIV/AIDS among peer educators in Limpopo. Unpublished research report at University of Stellenbosch.

Singh, S.K., Saxena, A. & Krishna, G.A. 2007. Profile of HIV infection / AIDS related knowledge among female students of Kanpur district, India. *Kathmandu University Medical Journal*, Vol. 5, No. 1, Issue 17, 27-31.

Sloan, N.M. & Myers, J.E. 2005. Evaluation of an HIV/AIDS peer education programme in a South African workplace. *South African Medical Journal* 95: 261-264.

Sloan, B.C. & Zimmer, C.G.1993. The power of peer health education. *J Am Coll Health*. 41(6):241-245.

Soul City Institute. 2009. One love: Preventing HIV in South Africa - Let's talk, respect and protect each other. Johannesburg: Uniprint.

Stiernborg, M., Zaldivar, S.B. & Santiago, E.G. 1996. Effect of didactic teaching and experiential learning on nursing students AIDS related knowledge and attitudes. *AIDS Care*, 8, (5): 601-608.

Stephens, L.L., Bachhuber, M.A., Seloilwe, E., Gungqisa, N., Mmelesi, M., Bussmann, H., Marlink, R.G. & Wester, C.W. 2012. HIV-Related knowledge, attitudes, and practice among educated young adults in Botswana. *Journal of AIDS and HIV Research* 4(6): 159-164.

Siringanathan, G., Jaworsky, D., Larkin, J., Flicker S, Campbell L, Flynn S, Janssen J and Erlich L. 2010. Peer sexual health education: Interventions for effective programme evaluation. *Health Education Journal*. 71(1) 62-71

Svenson, G. H. & Johnson, L. 2007. Impact of youth peer education programmes. Youth Research Working Paper No.9. Research Triangle Park, NC: FHI.

Terry, P.E., Mhloyi, M., Masvaure, T. & Adlis, S. 2006. An examination of knowledge, attitudes and practices related to HIV/AIDS prevention in Zimbabwean university: Comparing intervention program participants and non-participants. *International Journal of Infectious Diseases* 10, 38-46.

Truong, J. 2008. Peer Education: a Viable Approach for reaching Youth. Baltimore, MD: Global Health Technical Briefs: USAID.

Tshwane University of Technology. 2005: HIV/AIDS Policy. Pretoria: Author.

Understanding HIV/AIDS. " <http://www.schoolhealthservices.org/hiv-ids.cfm?subpage=49> [Accessed 16 February 2012]

Uganda Red Cross Society. 2011. Peer educators handbook- for behaviour change communication on HIV and related issues.

<http://www.redcrossug.org/bk2011/Peer%20Educators%20hand%20book.pdf> [Accessed 12 November 2012]

UNAIDS. 2000. Innovative approaches to HIV prevention: Selected case studies. UNAIDS/00.35E.

[http://www.who.int/hiv/topics/vct/sw_toolkit/Innovative approaches to HIV Prevention.pdf](http://www.who.int/hiv/topics/vct/sw_toolkit/Innovative_approaches_to_HIV_Prevention.pdf) [Accessed 5 May 2012]

UNAIDS. 2001. HIV and AIDS infection: information for United Nations employees and their families. Geneva: UNAIDS FHI/UNAIDS Best Practices in HIV/AIDS Prevention and Collection. UNAIDS and Family Health International.

UNAIDS. 2012. UNAIDS World AIDS Day Report 2011

United Nations Development Programme. (UNDP), 2007

UNESCO.2001. UNESCO's strategy for HIV/AIDS preventive education. Paris. International Institute for Educational Planning. Publications.

UNESCO. 2004. UNESCO's strategy for HIV/AIDS prevention education. Paris. International Institute for Educational Planning.
<http://unesdoc.unesco.org/images/0013/001345/134572e.pdf> [Accessed 5 May 2012]

US HIV Infection rate holds steady. USA Today [online]. Available at:
http://usatoday.com/news/health/2004-12-02-us-hiv_x.htm.

Van Den Eijnden, R.J.J.M., Buunk, B.P., Baker, A.B & Siero, F.W. 1999.The impact of information about the prevalence of AIDS-preventative behaviour among men and women: the mediating role of social norms. Psychol Health.1998; 13:467-479.

van Dyk, A. 2001. HIV/AIDS Care & Counselling. A multidisciplinary approach. Pearson Education: Cape Town, South Africa.

Visser, M. 2007. Sahara-J: Journal of Social Aspects of HIV/AIDS: An Open Access Journal. 4(3):678-94.

Welman, J.C. & Kruger, S.J. 2001. Research Methodology. Oxford University Press, Southern Africa: Cape Town.

West Virginia Bureau for Public Health. 2006. Youth peer education program HIV/AIDS and STD program. Division of Surveillance and Disease Control.
<http://www.wvdhhr.org/idep/aisdPeerEducation.asp> [Accessed 15 April 2012].

World Bank. 2002. HIV/AIDS: prevention and care strategies for HIV
<http://www.worldbank.org> [Accessed 5 May 2012].

World Health Organization. 2004. Fact Sheets on HIV/AIDS: a desktop reference. Geneva: World Health Organization.

Xiadong, T., Jingju, P., Dong, Z., Wang, C. & Xie, C. 2007. HIV/AIDS knowledge, attitudes and behaviours assessment of Chinese students: A questionnaire study. Int. J. Environ. Res. Public Health 4(3): 248-253

Zhe, Chun-yu, Di, et al. 2006. KAP of HIV/AIDS among college students in Shenyang. Chinese Journal of School Health, 2006, 02

Zhou, L., Zhanbao, M., Lijuan, F., Yuan, G., Zhe, G. & Baosen, Z. 2011. Effectiveness of peer education on knowledge and attitudes of HIV/AIDS in Shenyang, China. World Medical & Health Policy, 3, (2), 5.

8. APPENDICES

APPENDIX A: INFORMATION SHEET AND CONSENT FROM PARTICIPANTS AGED 18 YEARS AND ABOVE FOR THE SURVEY

INFORMATION SHEET

Who we are

Hello, I am ***Dixie Thomas Basini*** conducting a survey on the knowledge, attitudes and practices of peer educators and students on HIV/AIDS at this university.

What we are doing

We are conducting a research based project to assess knowledge, attitudes and practices of peer educators and students on HIV/AIDS. We are administering questionnaires to collect information that will assist us in creating with intervention strategies that are tailored for the improvement of peer education at this university. In this case, we ask you to participate in a survey

Your participation

We are asking you whether you will allow us to ask you a few questions from a questionnaire.

You will receive or be part of the interventions that are to be implemented irrespective of whether you agree or decline to participate in this survey

Please understand that your participation is voluntary and you are not being forced to take part in this study. The choice of whether to participate or not is yours alone. If you choose not take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time if you don't want to continue. If you do this there will be no penalties and you will NOT be prejudiced in ANY way.

Confidentiality

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly. All of these people are required to keep your identity confidential. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

The information you provide will not be published unless you give your specific permission in writing at the end of this consent form. All identifying information will be kept in a locked file cabinet and will not be available to others. We will refer to you by a code number or pseudonym (another name) in any publication.

Risks/discomforts

At the present time, we do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life. If any discomfort or risks are experienced during the study, please feel free to consult our counsellor at the health and wellness centre, Ms Winnie Maenetja and she can be contacted at the following number 012 382 9446.

Benefits

There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in developing intervention strategies.

If you would like to receive feedback on our study, we will record your phone number on a separate sheet of paper and can send you the results of the study when it is completed or invite you for a presentation of findings.

Who to contact if you have been harmed or have any concerns

This research will be approved by the Research Ethics Committee of the University of Stellenbosch. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact Ms

Marléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development or the study supervisor Prof Geoffrey Setswe on 011 950 4329.

CONSENT FORM FOR PARTICIPANT

I hereby agree to participate in research on knowledge, attitudes and practices of peer educators and students on HIV/AIDS. I understand that my participation is free and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that the decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to materially benefit me personally in the immediate or short term.

I understand that my participation in the study will remain confidential, and the filling up of this questionnaire, will constitutes an informed consent from my side.

APPENDIX B:**QUESTIONNAIRE: KAP OF PEER EDUCATORS AND STUDENTS AT TUT****SECTION 1: DEMOGRAPHIC INFORMATION**

Instruction: Mark with an X in the appropriate box

1. What is your gender?

Male	Female

2. What is your year of study?

First Year	Second Year	Third Year	Fourth Year	Other (specify)

3. Where are you stationed?

Pretoria campus	Ga-rankuwa campus	Soshanguve campus

4. How long have you been a student at Tshwane University of Technology?

0-1 year	2 years	3 years	4 years or more

5. What is your age range?

18 years or younger	19-24	25-30	31 or older

6. What is your highest qualification?

Grade 12	National Diploma	Degree +

SECTION 2: KNOWLEDGE OF HIV/AIDS

Instruction: Mark with an X at your most appropriate response

7. There is no difference between HIV and AIDS.

Strongly agree	Agree	Disagree	Strongly disagree

8. Tears are one of the bodily fluids that have been identified as being a risk factor in the transmission of the HIV.

Strongly agree	Agree	Disagree	Strongly disagree

9. You can get HIV from mosquito bites.

Strongly agree	Agree	Disagree	Strongly disagree

10. Wearing gloves is essential when assisting a person who is bleeding.

Strongly agree	Agree	Disagree	Strongly disagree

11. There is a cure for AIDS.

Strongly agree	Agree	Disagree	Strongly disagree

12. HIV/AIDS is a private matter; I do not discuss it with anyone.

Strongly agree	Agree	Disagree	Strongly disagree

13. Having sexual intercourse with a virgin can cure AIDS.

Strongly agree	Agree	Disagree	Strongly disagree

SECTION 3: ATTITUDES TOWARDS HIV/AIDS

14. I know someone who is HIV positive.

Strongly agree	Agree	Disagree	Strongly disagree

If strongly agree, what is your relationship with the person?

Fellow student	Friend	Family member	Neighbor	Community member	Other (specify)

15. If a student shares a desk with a person who is HIV positive, there is high risk of being infected.

Strongly agree	Agree	Disagree	Strongly disagree

16. Children who are HIV positive should be allowed to mix with other children.

Strongly agree	Agree	Disagree	Strongly disagree

17. If you happen to go for an HIV test and the result turn out to be positive, will you disclose your HIV status?

Strongly agree	Agree	Disagree	Strongly disagree

18. Whom would you not disclose your HIV status to, if tested HIV positive.

Friend	Fellow student/ colleague	Sexual partner	Family member	Counselor	None	Other (specify)

19. I am able of taking care of someone who is infected with HIV or dying with AIDS related disease.

Strongly agree	Agree	Disagree	Strongly disagree

20. In a sexual relationship, only women should be responsible for the prevention of HIV transmission.

Strongly agree	Agree	Disagree	Strongly disagree

21. Only black people can get HIV.

Strongly agree	Agree	Disagree	Strongly disagree

22. People with many sexual partners are at a greater risk of contracting HIV.

Strongly agree	Agree	Disagree	Strongly disagree

23. I do not feel comfortable to demonstrate the utilization of male or female condoms to my fellow students or community members.

Strongly agree	Agree	Disagree	Strongly disagree

SECTION 4: PRACTICES RELATED TO HIV/AIDS

24. There are no benefits in knowing one's HIV status.

Strongly agree	Agree	Disagree	Strongly disagree

25. I will not participate in a HCT [HIV Counselling and Testing] campaign.

Strongly agree	Agree	Disagree	Strongly disagree

26. When last did you go for HIV testing?

3 months back	6 months back	12 months back	24 months back	Never

27. I believe is appropriate to conduct HCT [HIV Counseling and Testing] at the university.

Strongly agree	Agree	Disagree	Strongly disagree

28. I have been shown how to use a condom by a professional coordinator/trainer.

Strongly agree	Agree	Disagree	Strongly disagree

29. I always use a condom when having sex.

Strongly agree	Agree	Disagree	Strongly disagree

30. I do believe that condoms, if properly used prevent the transmission of HIV.

Strongly agree	Agree	Disagree	Strongly disagree

31. Under which circumstances would you not wear a condom?

(You can choose more than one option)

With my spouse	With my sexual partner	During anal sex	Having sex for the first time	Never

32. People who engage in an unprotected anal sex are not at risk of contracting HIV.

Strongly agree	Agree	Disagree	Strongly disagree

33. When engaging in an unprotected sexual activity, I do not think about HIV infection as a risk to my partner or myself.

Strongly agree	Agree	Disagree	Strongly disagree

34. People who tested HIV positive should not have sexual intercourse.

Strongly agree	Agree	Disagree	Strongly disagree

35. People who practice sexual acts like unprotected anal sex deserve the right to get HIV.

Strongly agree	Agree	Disagree	Strongly disagree

36. Tshwane University of Technology should continue providing condoms.

Strongly agree	Agree	Disagree	Strongly disagree

37. I believe in having multi-concurrent partners. (More than one sexual partner)

Strongly agree	Agree	Disagree	Strongly disagree

SECTION 4: GENERAL QUESTIONS ON HIV/AIDS AND PEER EDUCATION

38. What influenced you to become a Peer Educator?

(To be answered by peer educators)

Nominated by co-ordinator	Recruited by a peer educator	Recruited by friend	Personal interest

39. I have been trained on HIV/AIDS.

Strongly agree	Agree	Disagree	Strongly disagree

40. If you strongly agree, on which year were you trained?

Before 2008	2009	2010	2011	2012

Please state key issues you were trained on.

.....

41. Do you still need any training on HIV/AIDS?

Yes	No

If yes, please specify

42. What type of challenges do you experience while performing your task as a Peer Educator?

43. What recommendations do you have with regard to Peer Education Programme at Tshwane University of Technology?

44. If you happen to test HIV positive, would you still be prepared to continue with Peer Education?

Strongly agree	Agree	Disagree	Strongly disagree

THANK YOU FOR TAKING YOUR TIME TO COMPLETE THIS QUESTIONNAIRE.